Bang & Olufsen

Beovision MX 3000

Beolink 1000 Terminal
Stand 3000
Video Stand

Beovision MX 4500

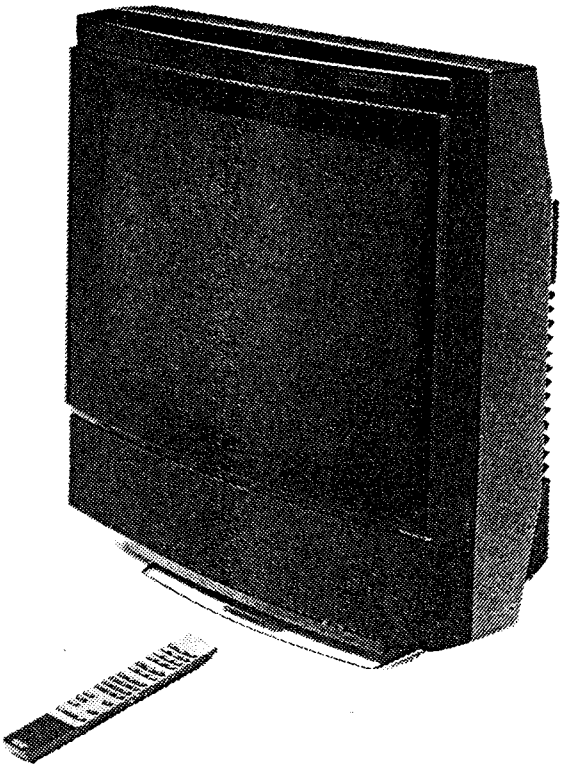
Stand 5000

Beovision MX 5000

Nicam 728
MB 5000
MS 5000

Nicam 728

New version



SERVICE MANUAL

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Beovision MX 4500

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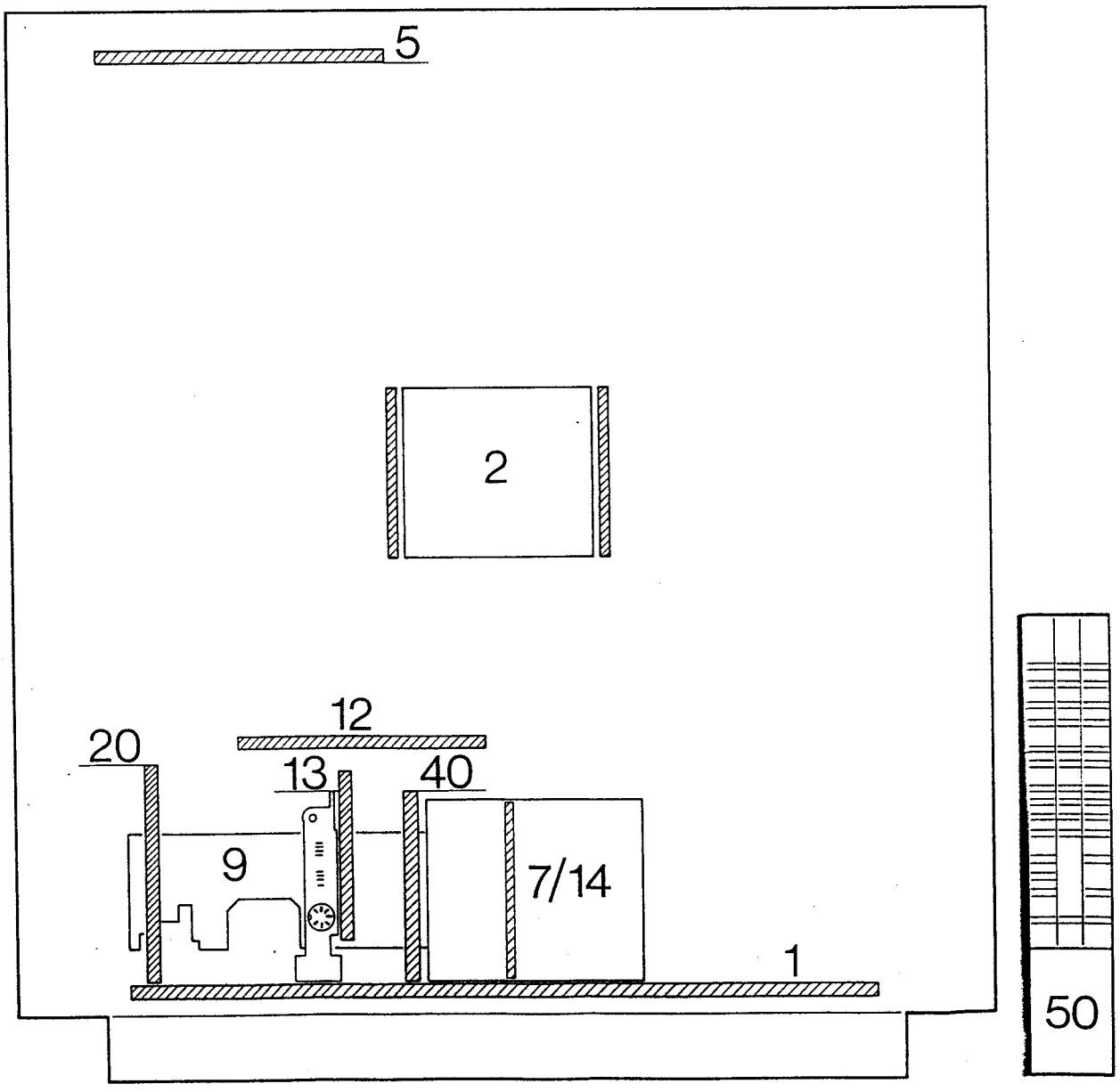

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TECHNICAL SPECIFICATIONS	BEOVISION MX3000
Picture tube size	55 cm – 21"
Visual picture size	51 cm – 20"
Picture tube	Full square, black matrix
	In Line 110 degrees
Cabinet	Red, white, black, blue and grey
Operation	Beolink 1000
	Audio Aux Link, two-way datalink
Screen display	Programme No., Frequency,
	Picture and Sound adjustments
Sound system	Stereo decoder A2 built-in
	Bilingual sound A2 built-in
	Stereo enhancement, mono pseudo stereo
Nicam stereo	Prepared for Nicam stereo module
Teletext	5 languages: S-D-GB-I-F
Teletext memory	4 complete pages, + 4 page numbers for
	each TV programme, total 128 numbers
Number of TV programmes	32
Digital tuning system	VHF + S + Hyper + UHF channels
Tuner range	45 – 855 MHz
Satellite programmes	Prepared for Beosat RX, AV Link 21-pin
	Beolink 1000 operation
Speaker system, stereo	2 Log Line
Speaker units	2 x 7.5 cm – 3"
Sound power output RMS	2 x 15 watts/8 ohms
Sound power output music	2 x 18 watts/8 ohms
Harmonic distortion	<0.5%
Intermodulation	<1%
Frequency range ±1.5 dB	20-20,000 Hz
Power bandwidth	20-12,500 Hz
Signal-to-noise ratio	>50 dB
Bass control	+16 -6 dB/60 Hz
Treble control	±10 dB/10,000 Hz
Power supply	180-260 volts/50-60 Hz
Power consumption	70 (50-120) watts
Stand by	<5 watts
Dimensions W x H x D	51 x 55 x 41.5 cm
Weight	23 kg
Connections	
AV Link	21-pin
Audio Aux Link	7-pin
Stereo headphones	Jack, separate volume control
External speakers	8 ohms

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Accessories	
Stand	ST 3000: Type 3085
Beosat RX receiver, AV Link	Type 3026
Nicam stereo kit, EU	Type 3037
Nicam stereo kit, GB	Type 3040
Loop amplifier	Type 3098

Type Survey

Type		Colour	System	Teletext	Transposer
3140	EU-MULTI	PAL-SECAM	B-G-I-L		X
3141	EU-MULTI	PAL-SECAM	B-G-I-L	X	X
3143	AUS	PAL-SECAM	B-G	X	
3144	I	PAL-SECAM	B-G	X	
3145	EU-FTZ	PAL-SECAM	B-G		
3146	EU-FTZ	PAL-SECAM	B-G	X	
3147	E	PAL-SECAM	B-G	X*	

* 6 character S-D-GB-I-F-E

Subject to change without notice

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DIAGRAMFORKLARING

På diagrammerne er der angivet typenumre på transistorer og IC'er. Hvis positionsnummeret er efterfulgt af en stjerne, skal reservedelsnummeret altid benyttes, da denne komponent er specielt udvalgt, f.eks. TR102*.

Komponenttryk og koordinatsystem

PCB-tegningerne over de største printplader indeholder et komponenttryk og et koordinatsystem. På diagrammerne er enhver komponent forsynet med et koordinatnummer. Dette fortæller i hvilket koordinat på PCB-tegningen, komponenten er placeret. Koordinatnumrene er angivet med mindre skrifttype end positionsnumrene.

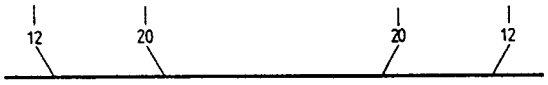
Styrekredsløb

I visse styrekredsløb er den aktive tilstand angivet med en funktionsangivelse. Denne kan eksempelvis være $\overline{\text{ST.BY.}}$ = »low« i stand-by-stilling eller ST.BY. = »high« i stand-by-stilling.

Ledningsforbindelser

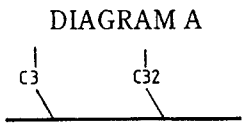
Ledningsforbindelserne på diagrammerne er samlet i »bundter«. De enkelte ledninger er forsynet med en af følgende koder:

INTERN FORBINDELSE PÅ EN DIAGRAMSIDE



Interne forbindelser på en diagramside angives med et tal. Knækket på ledningen viser, i hvilken retning, den anden ende af ledningen findes.

FORBINDELSE TIL EN ANDEN DIAGRAMSIDE



Forbindelsen til en anden diagramside angives med et tal samt et bogstav for det diagram, forbindelsen går til.

Forsyningsspændinger

Alle forsyningsspændinger i diagrammerne er angivet med en pil og en spændingsangivelse.

Eksempel:
Ved siden af spændingsangivelsen står der f.eks. 7 CON. Dette betyder, at den pågældende forsyningsspænding går til 7 steder på den pågældende diagramside (7 CON. = 7 connections).

EXPLANATION OF DIAGRAM

Type numbers of transistors and ICs are indicated on the diagrams.
If the position number is followed by an asterisk the spare part number must always be used because the component in question has been specially selected, e.g. TR102*.

Component print and coordinate system

The PCB drawings of the largest printed circuit boards include a component print and a coordinate system.
On the diagrams every component has a coordinate number. This indicates in which coordinate on the PCB drawing the component is situated. The coordinate numbers are written in smaller print types than the position numbers.

Control Circuit

In certain control circuits the active mode is indicated by a function term. This may be e.g. $\overline{\text{ST.BY.}}$ = low in the stand-by mode or ST.BY. = high in the stand-by mode.

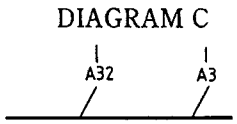
Wiring Connections

The wiring connections on the diagrams are assembled in 'bundles'. The individual wires are provided with one of the following codes:

INTERNAL CONNECTION ON ONE DIAGRAM PAGE

Internal connections on a diagram page are indicated by a number. The bend of the wire indicates in which direction the other end of the wire is found.

CONNECTION TO ANOTHER DIAGRAM PAGE



A connection to another diagram page is indicated by a number as well as by a letter of the diagram to which the connection leads.

Supply Voltages

All supply voltages in the diagrams are indicated by an arrow and a voltage indication.

Example:
"7 CON.". This means that the supply voltage in question goes to 7 different places on the diagram page in question (7 CON = 7 connections).

SYMBOL FOR SIKKERHEDSKOMPONENTER

Ved udskiftning af komponenter med dette symbol skal der anvendes komponenter med samme reservedelsnummer. Den nye komponent skal monteres på samme måde som den udskiftede.

MÅLEBETINGELSER

Alle DC-spændinger er målt i forhold til stel med et voltmeter med en indgangsmodstand på 10 Mohm.

DC-spændingerne og oscillogrammerne er målt i TV-mode med »BRILLIANCE« niveau 20, »CONTRAST« niveau 24 og »COLOUR« niveau 40.

DC-spændingerne er opgivet i volt (V), f.eks. 0,7 V.

Alle oscillogrammer og AC-spændinger er målt i forhold til stel med et oscilloskop eller et voltmeter med en indgangsmodstand på 1 Mohm.

AC-spændingerne er opgivet i millivolt (mV), f.eks. 660 mV.

SYMBOL OF SAFETY COMPONENTS

When replacing components with this symbol, components with identical part numbers must be used. The new component must be mounted in the same way as the one replaced.

MEASURING CONDITIONS

All DC voltages have been measured in relation to ground with a voltmeter with an input resistance of 10 Mohms.

The DC voltages and oscillogrammes have been measured in the TV mode with "BRILLIANCE" level 20, "CONTRAST" level 24 and "COLOUR" level 40.

The DC voltages are stated in volts (V), e.g. 0.7 V.

All oscillograms and AC voltages have been measured in relation to ground with an oscilloscope or a voltmeter with an input resistance of 1 Mohm.

AC voltages are stated in millivolts (mV), e.g. 660 mV.

2-2

DIAGRAM OF TTU1 – VHF TUNER

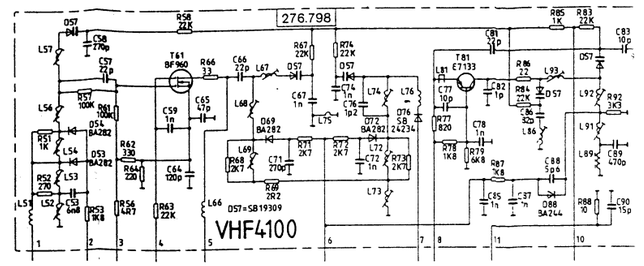
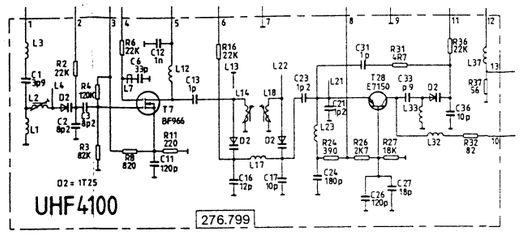
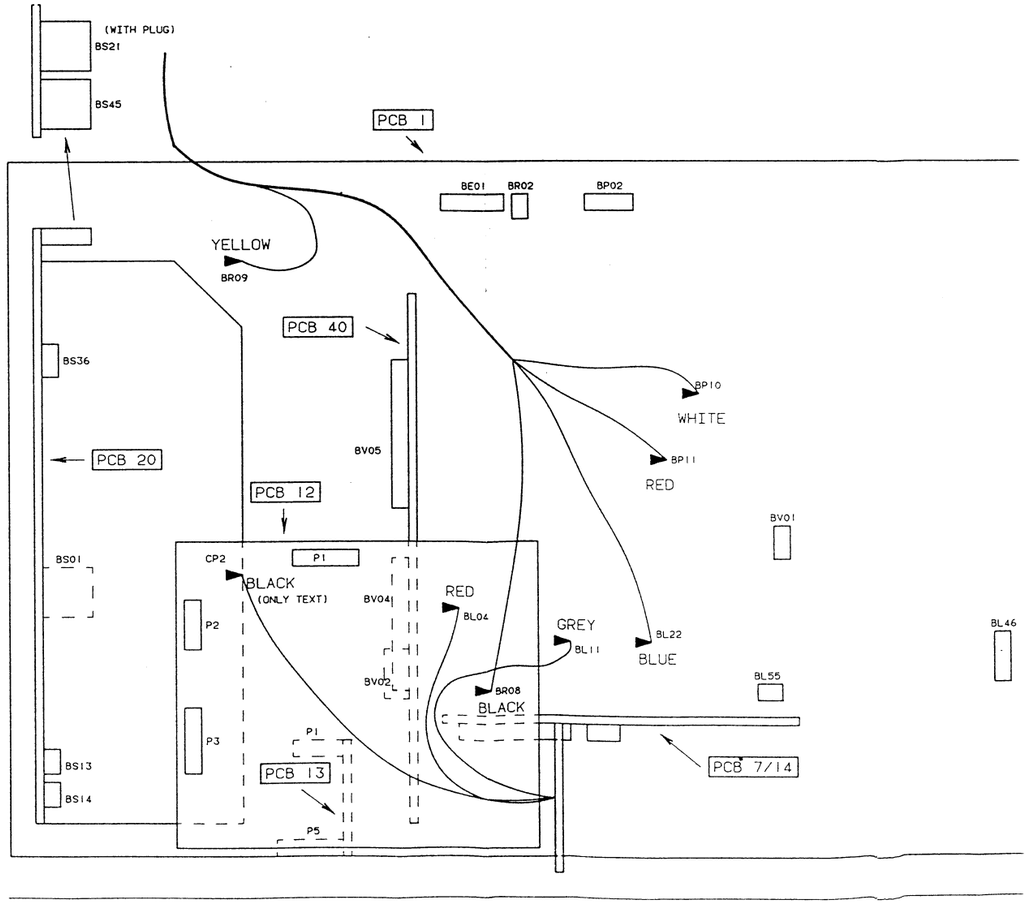


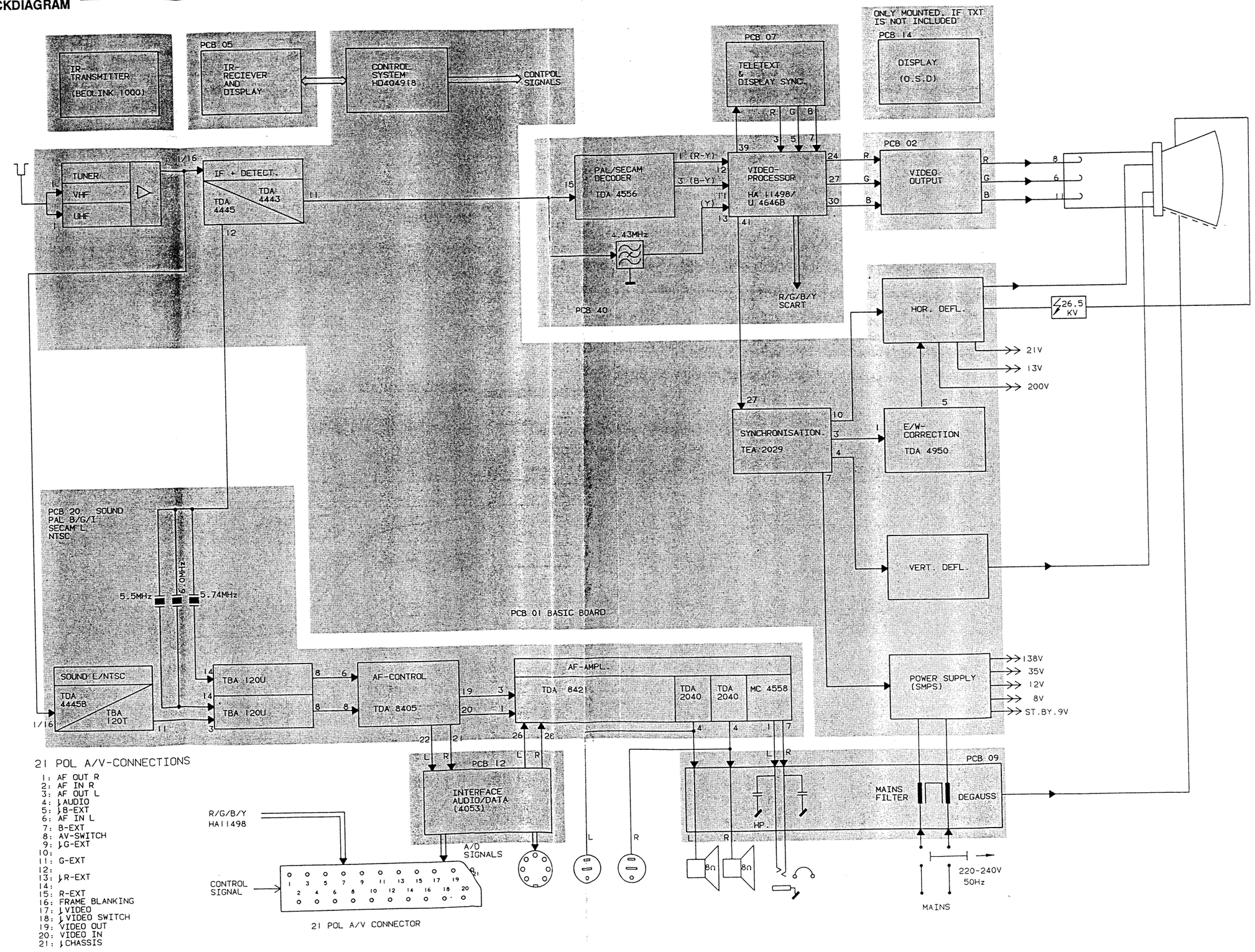
DIAGRAM OF TTU2 – UHF TUNER



WIRING DIAGRAM



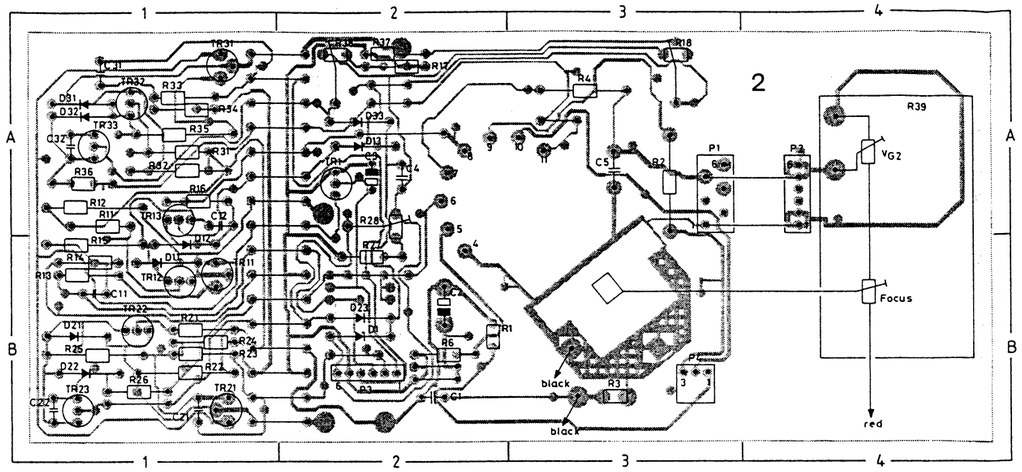
BLOCKDIAGRAM



21 POL A/V-CONNECTIONS

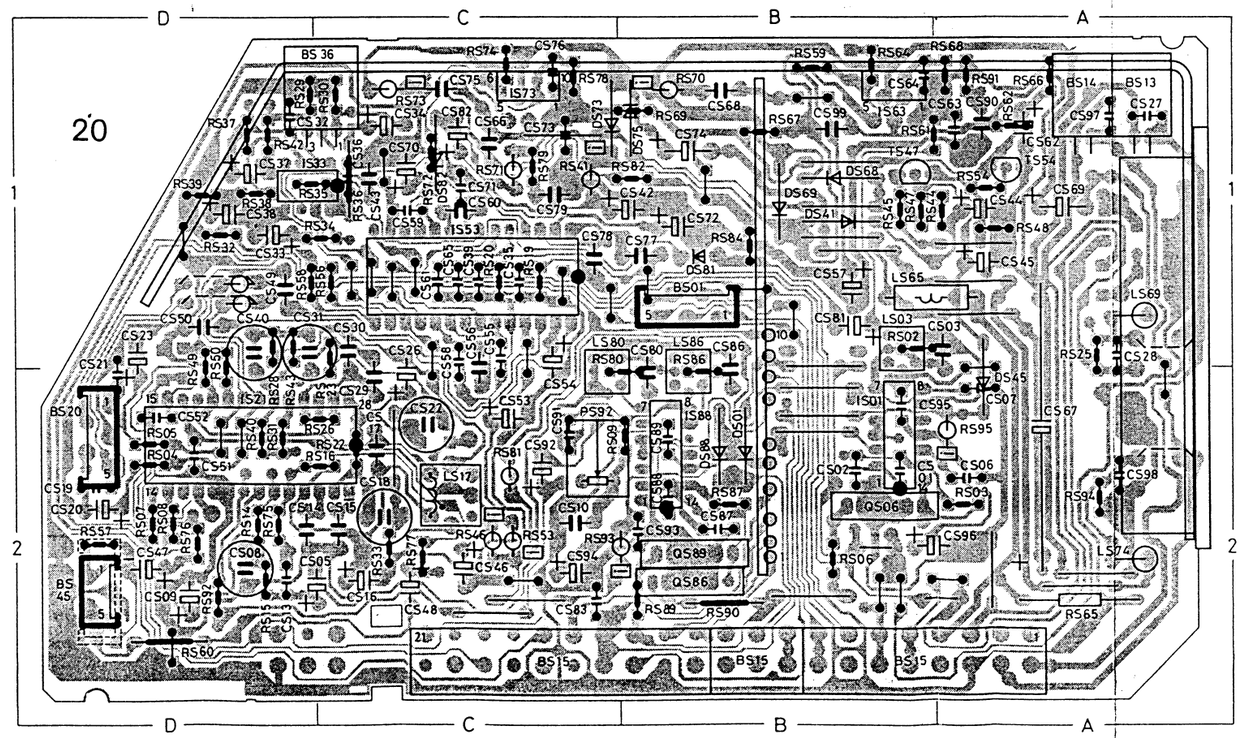
1: AF OUT R
2: AF IN R
3: AF OUT L
4: ⏚ AUDIO
5: ⏚ B-EXT
6: AF IN L
7: B-EXT
8: AV-SWITCH
9: ⏚ G-EXT
10:
11: G-EXT
12:
13: ⏚ R-EXT
14:
15: R-EXT
16: FRAME BLANKING
17: ⏚ VIDEO
18: ⏚ VIDEO SWITCH
19: VIDEO OUT
20: VIDEO IN
21: ⏚ CHASSIS

PCB2, VIDEO OUTPUT



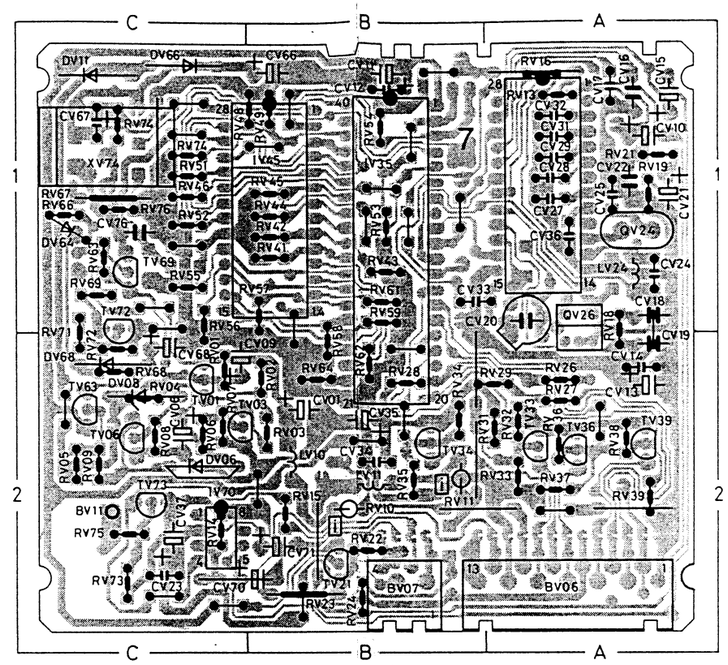
A4 A5 A6

PCB20, SOUND B/G/I/L/M

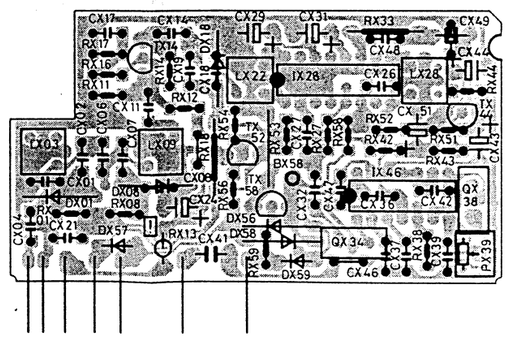


PCB 7, Sub module
Teletext see page 17-1

PCB7, TELETEXT



AM/FM SOUND



PCB 1, Basic Board

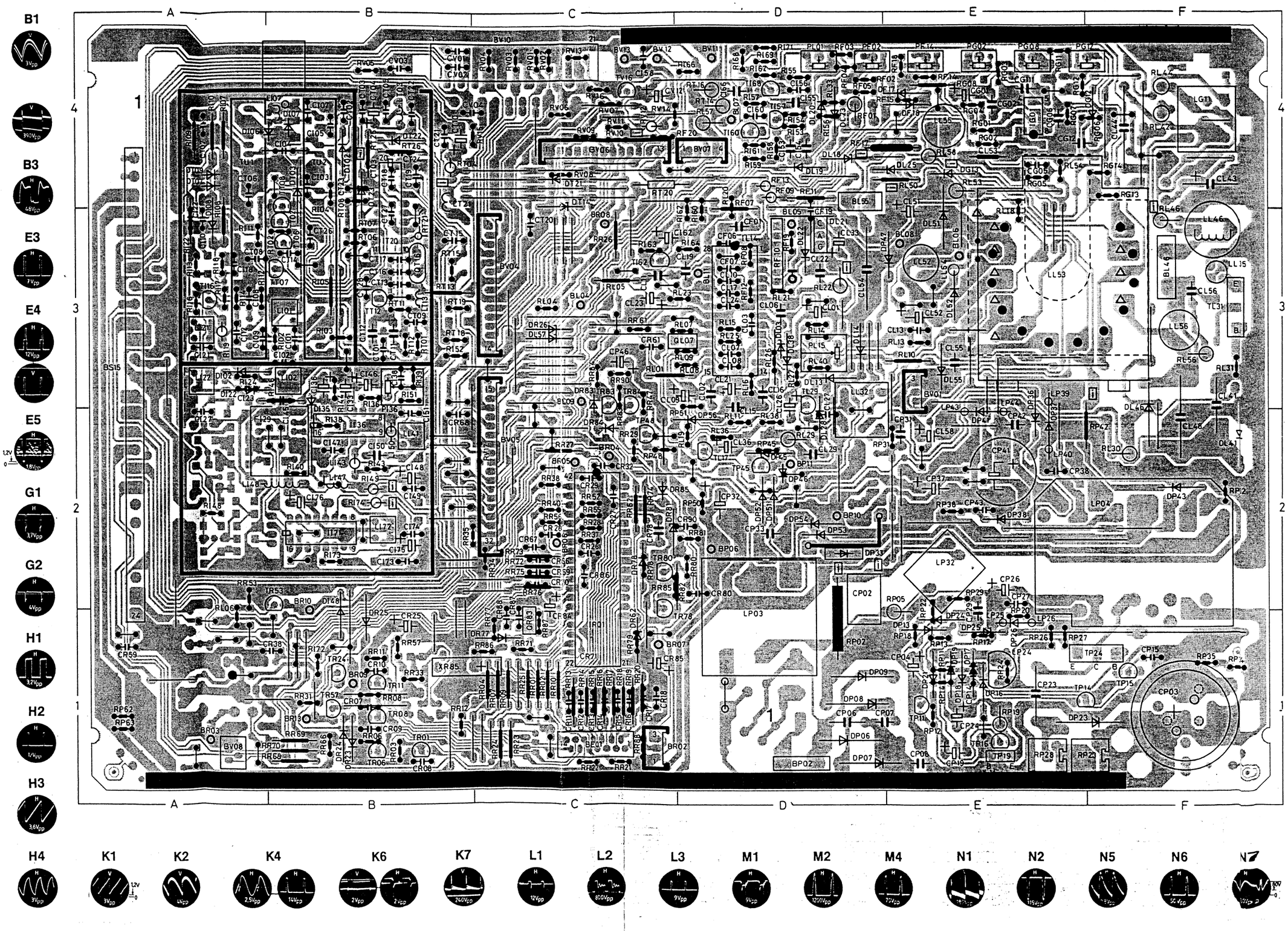
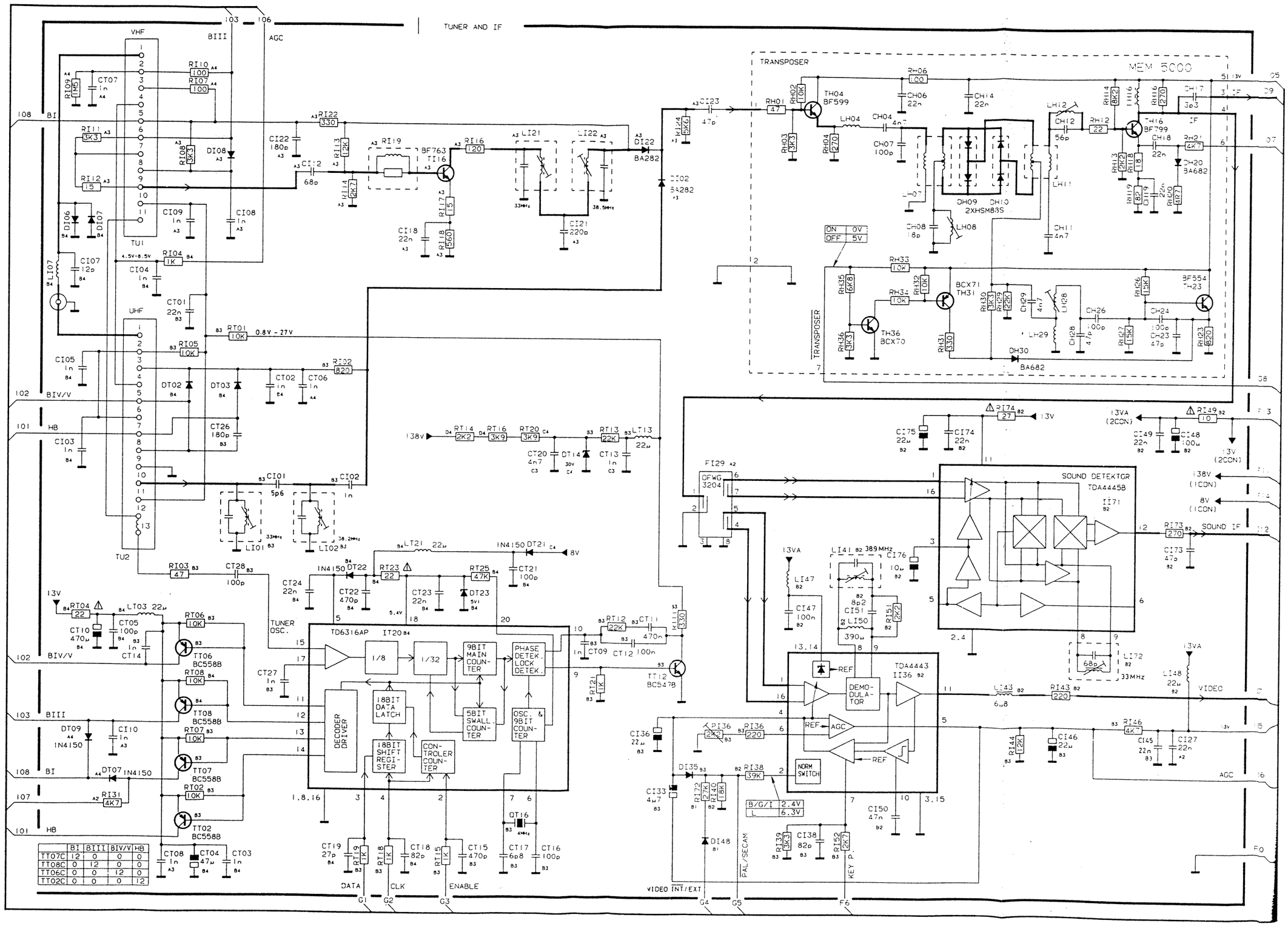
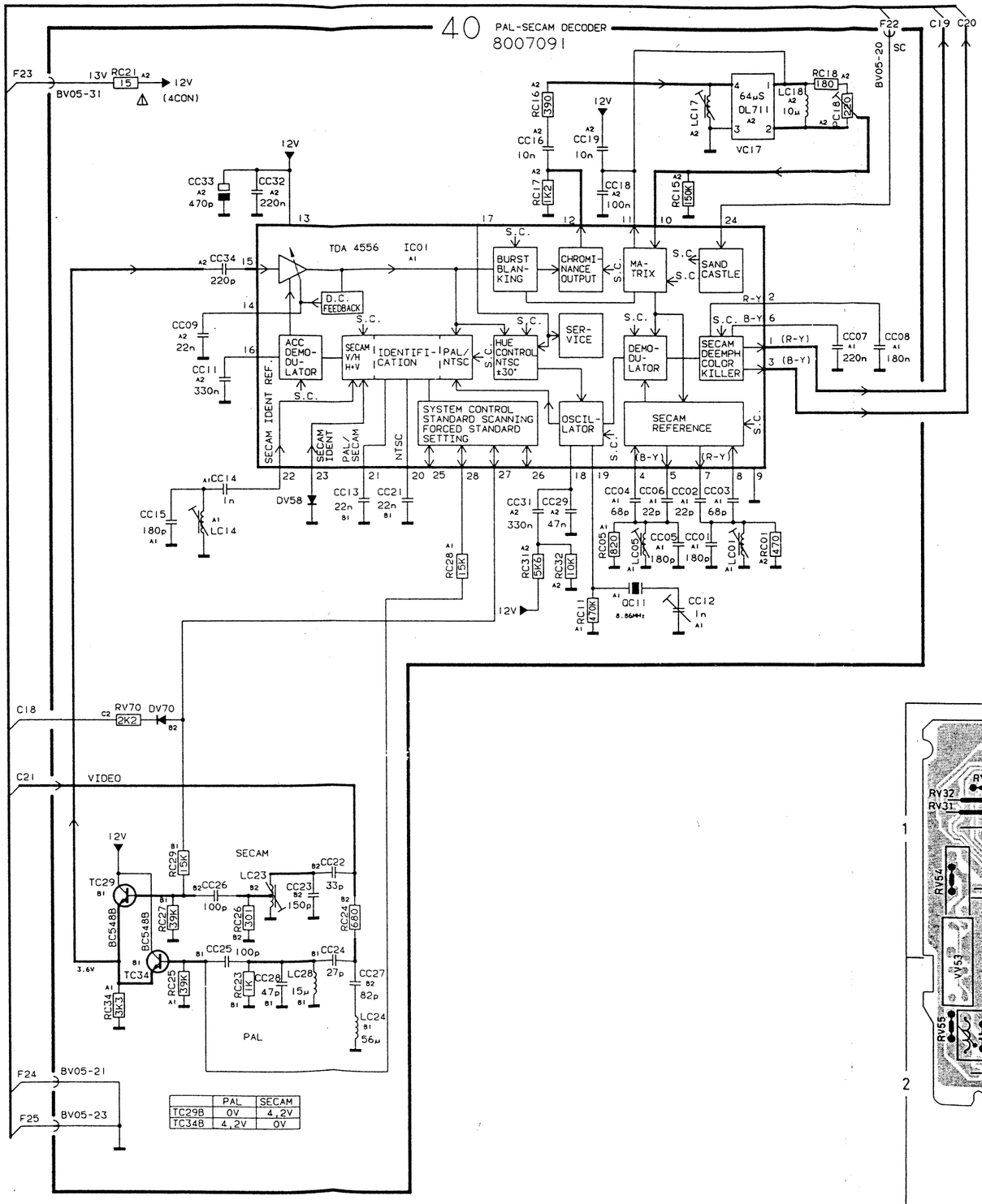


DIAGRAM A TUNER AND IF SYSTEM



	BI	BIII	BIV/V	HB
TT07C	12	0	0	0
TT08C	0	12	0	0
TT06C	0	0	12	0
TT02C	0	0	0	12

DIAGRAM B IF SYSTEM B/G/I/L



PCB40, PAL/SECAM DECODER

A1 **A2** **A3** **A7**

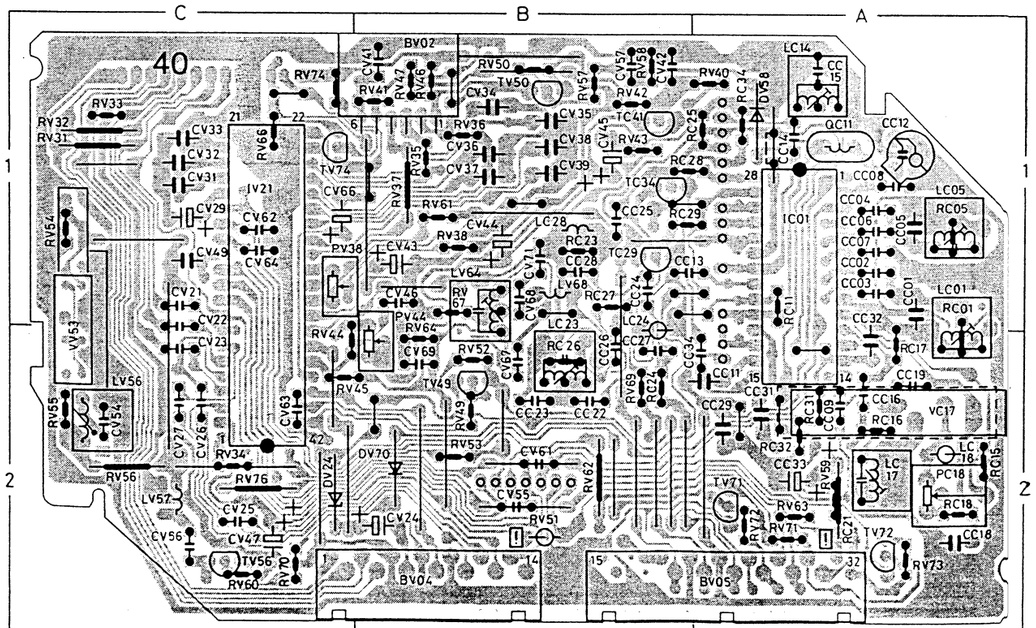


DIAGRAM C PAL/SECAM DECODER, VIDEO OUTPUT

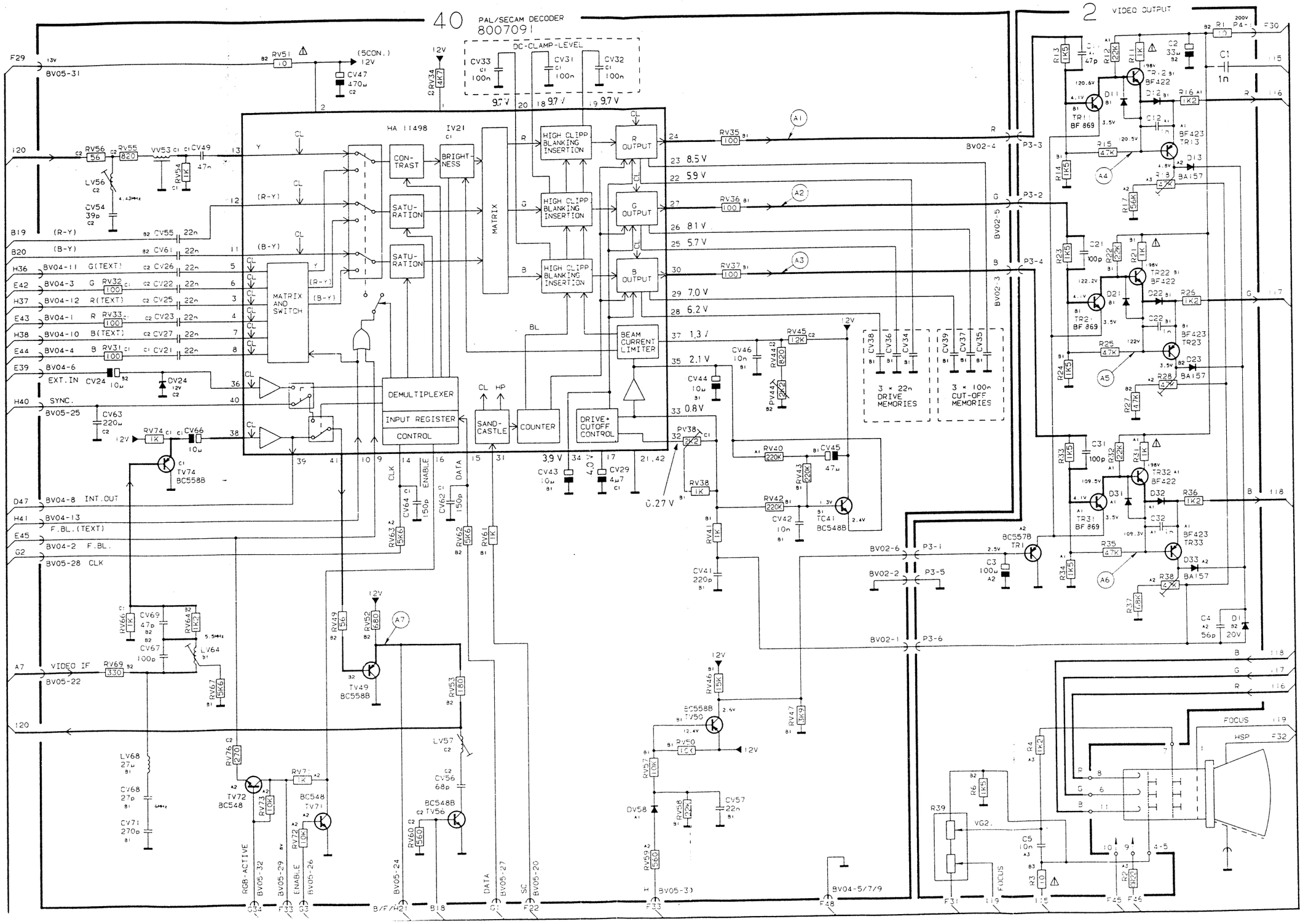


DIAGRAM D STEREO DECODER, SOUND CONTROLS

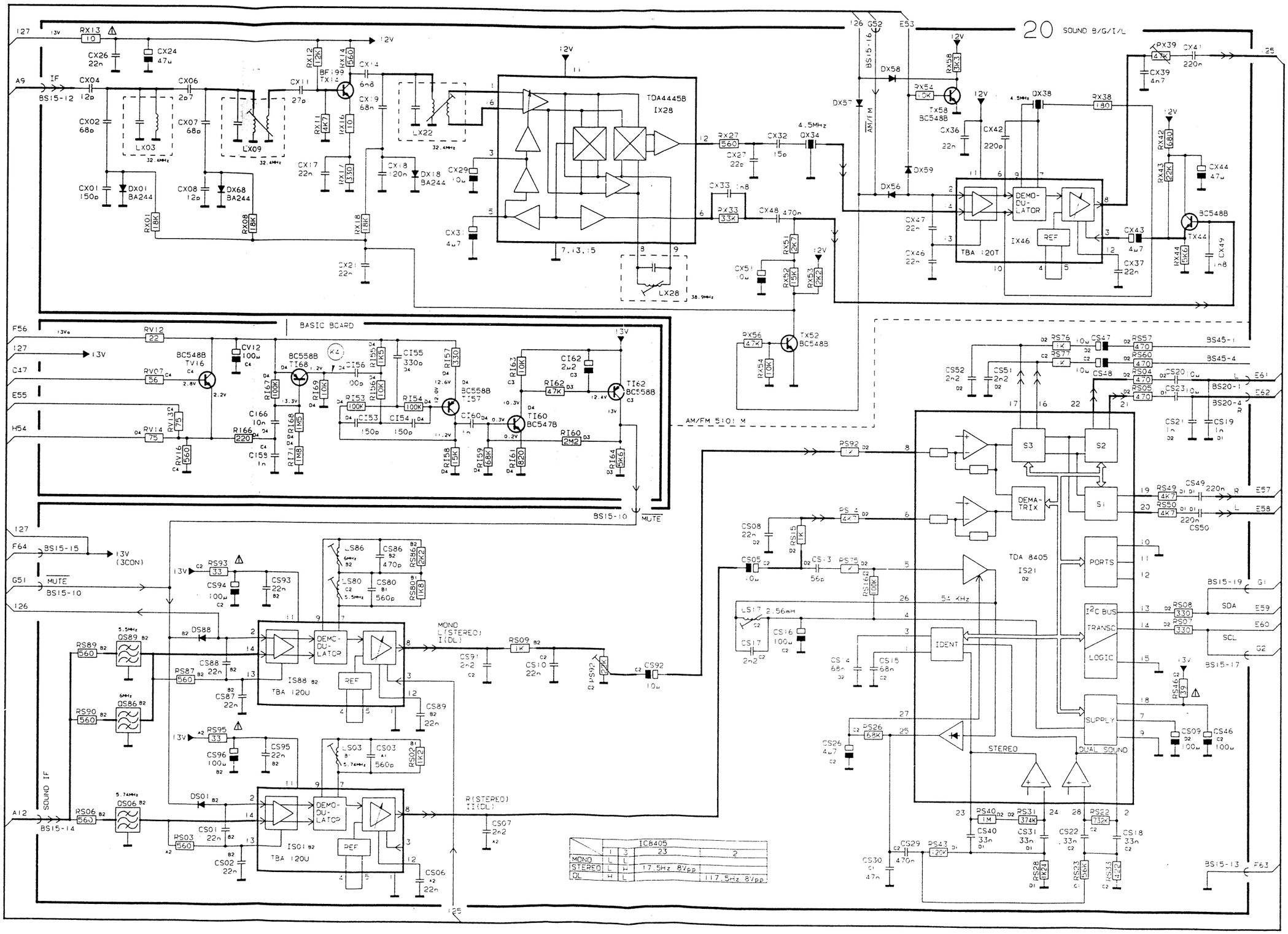


DIAGRAM E AF-AMPLIFIER, LINK INTERFACE A/V CONNECTIONS

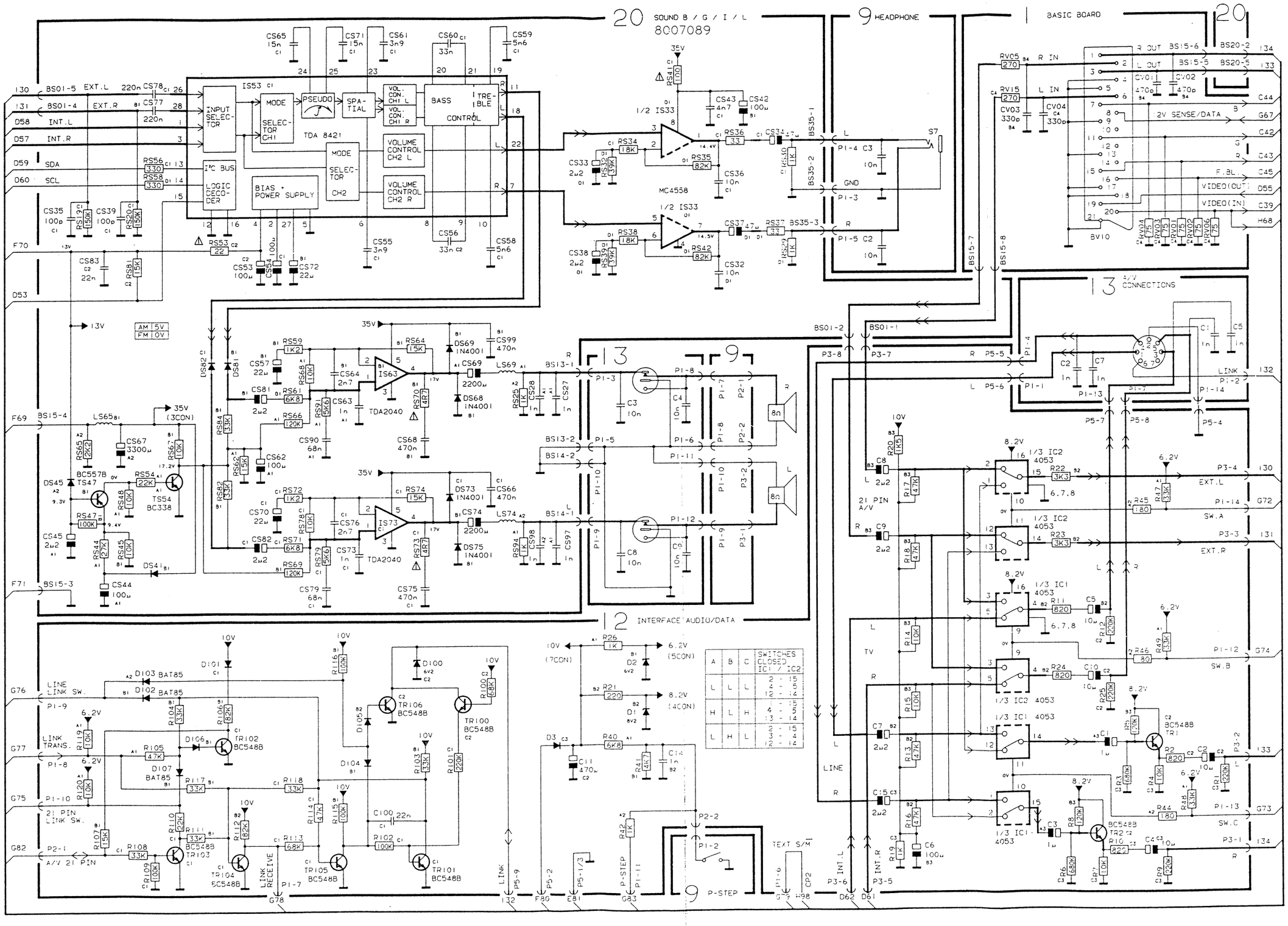


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DIAGRAM F POWER SUPPLY, DEFLECTION

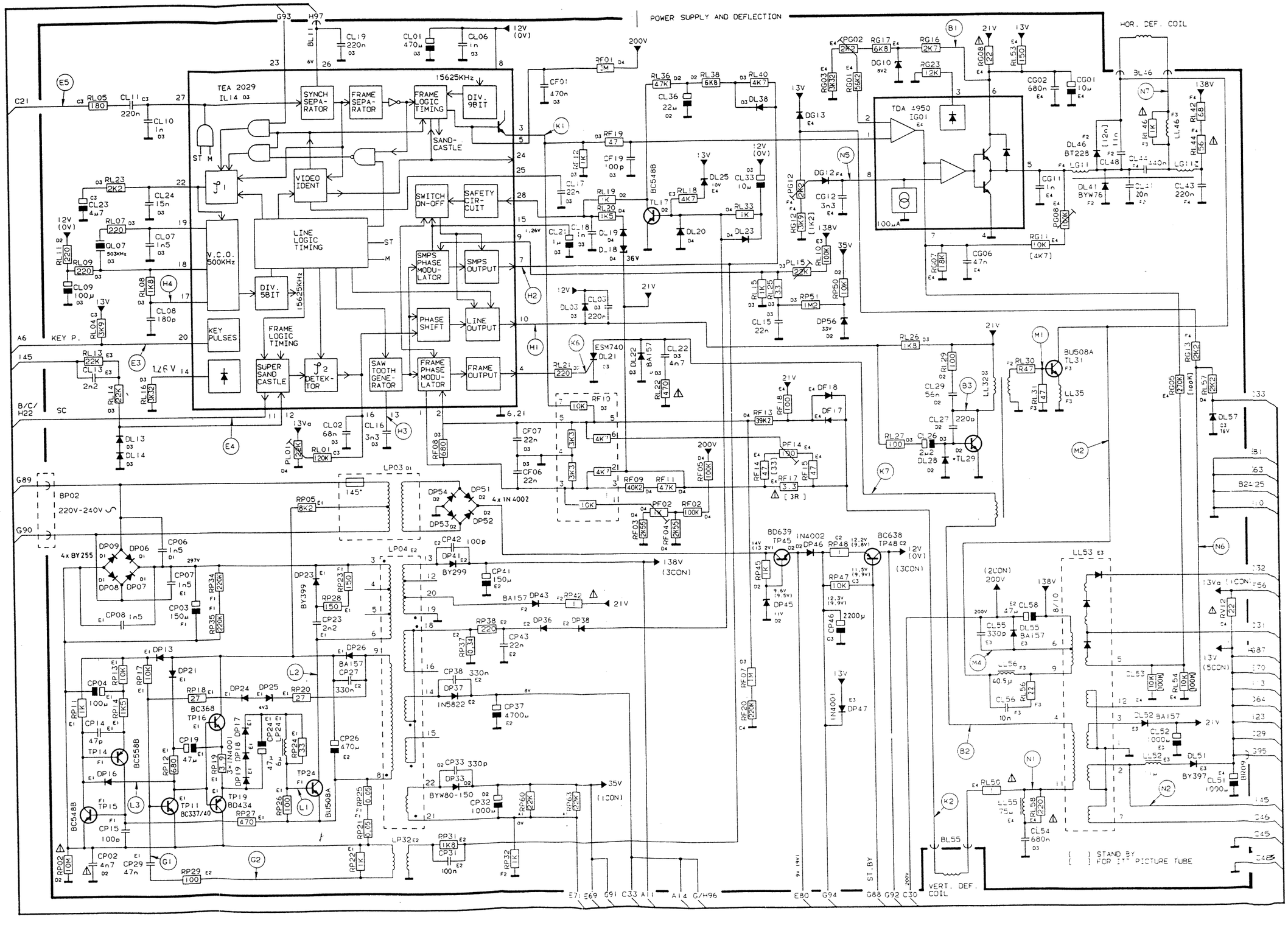


DIAGRAM G IR-RECEIVER, CONTROL, MAINS SWITCH

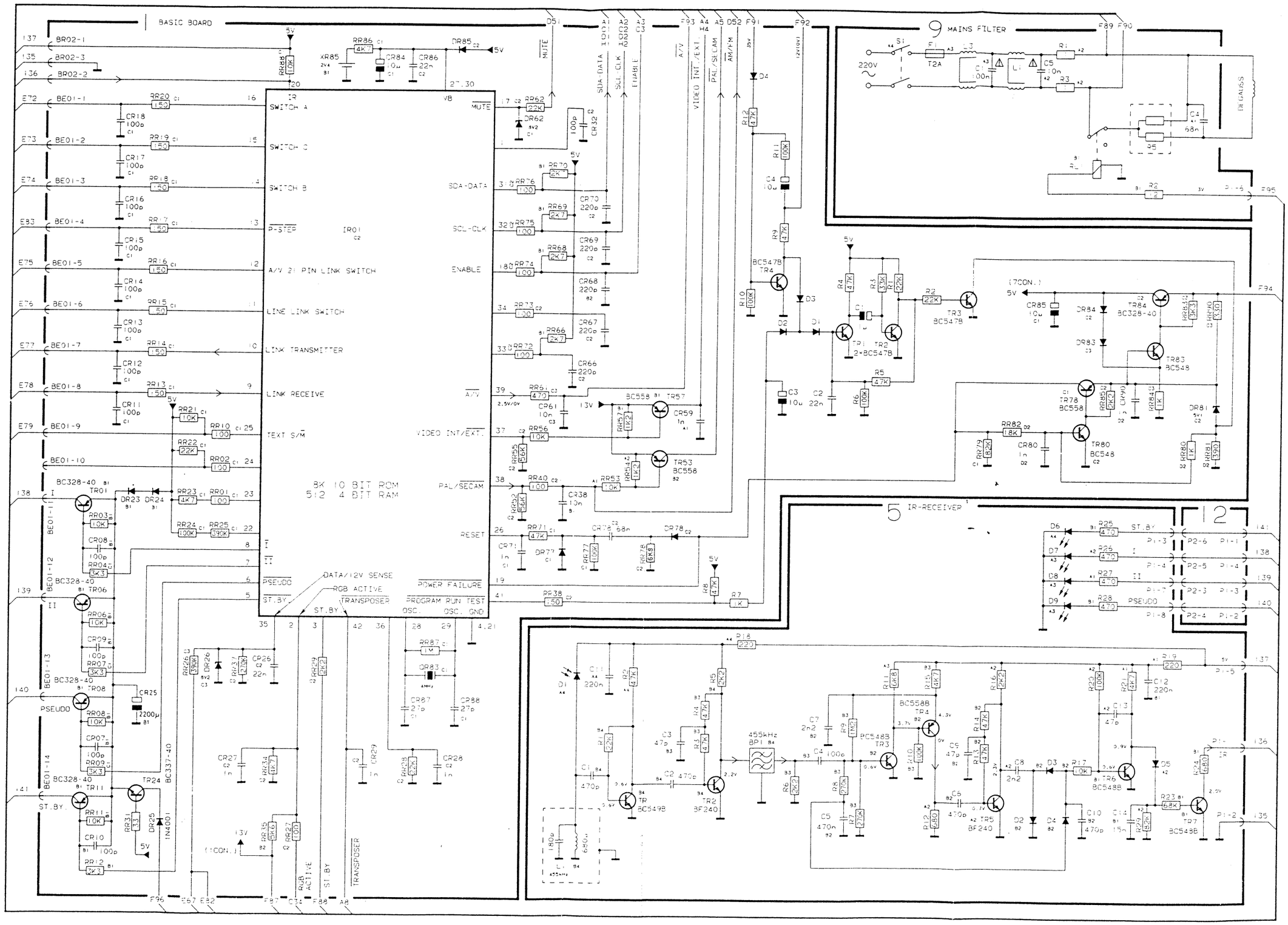
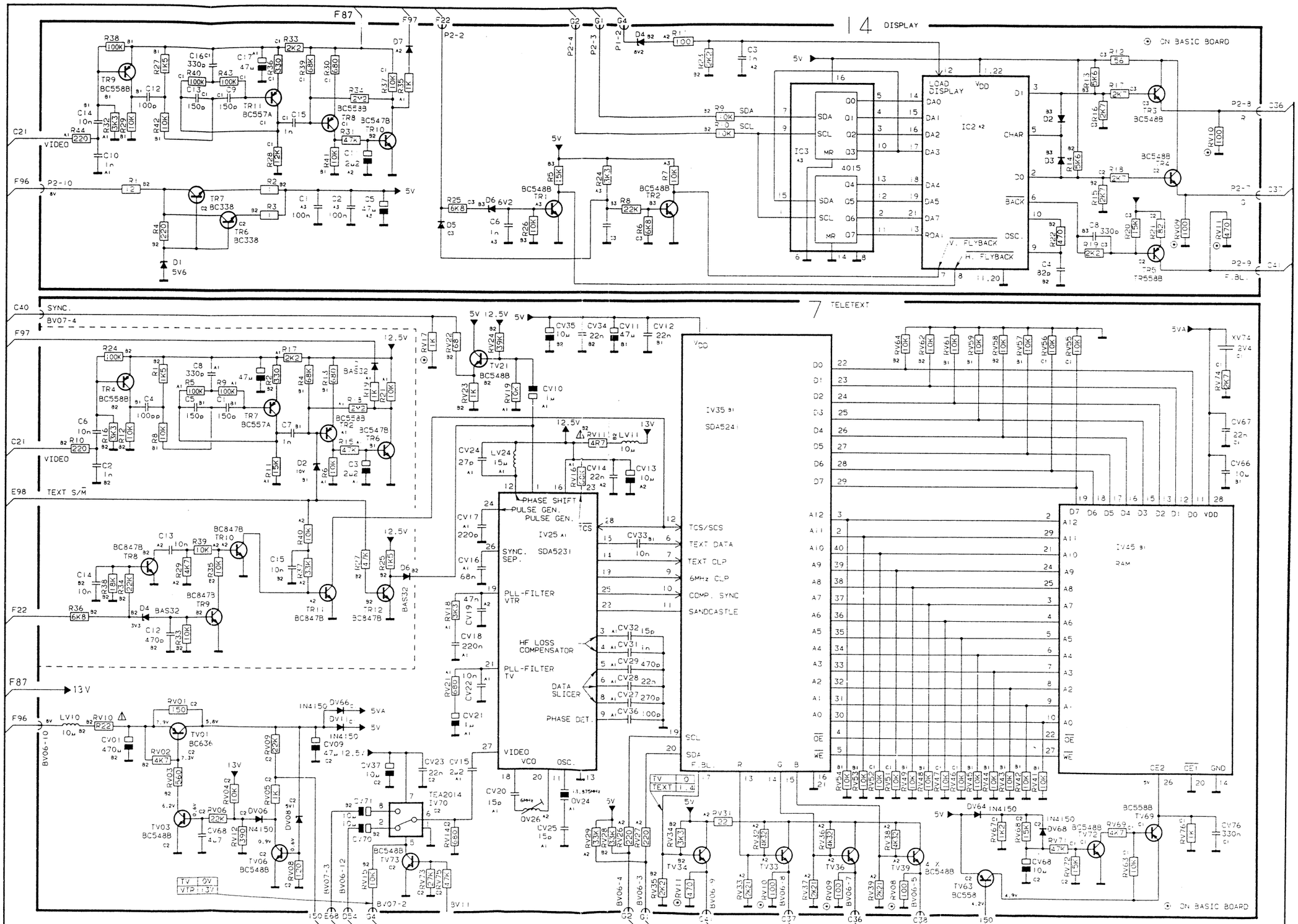
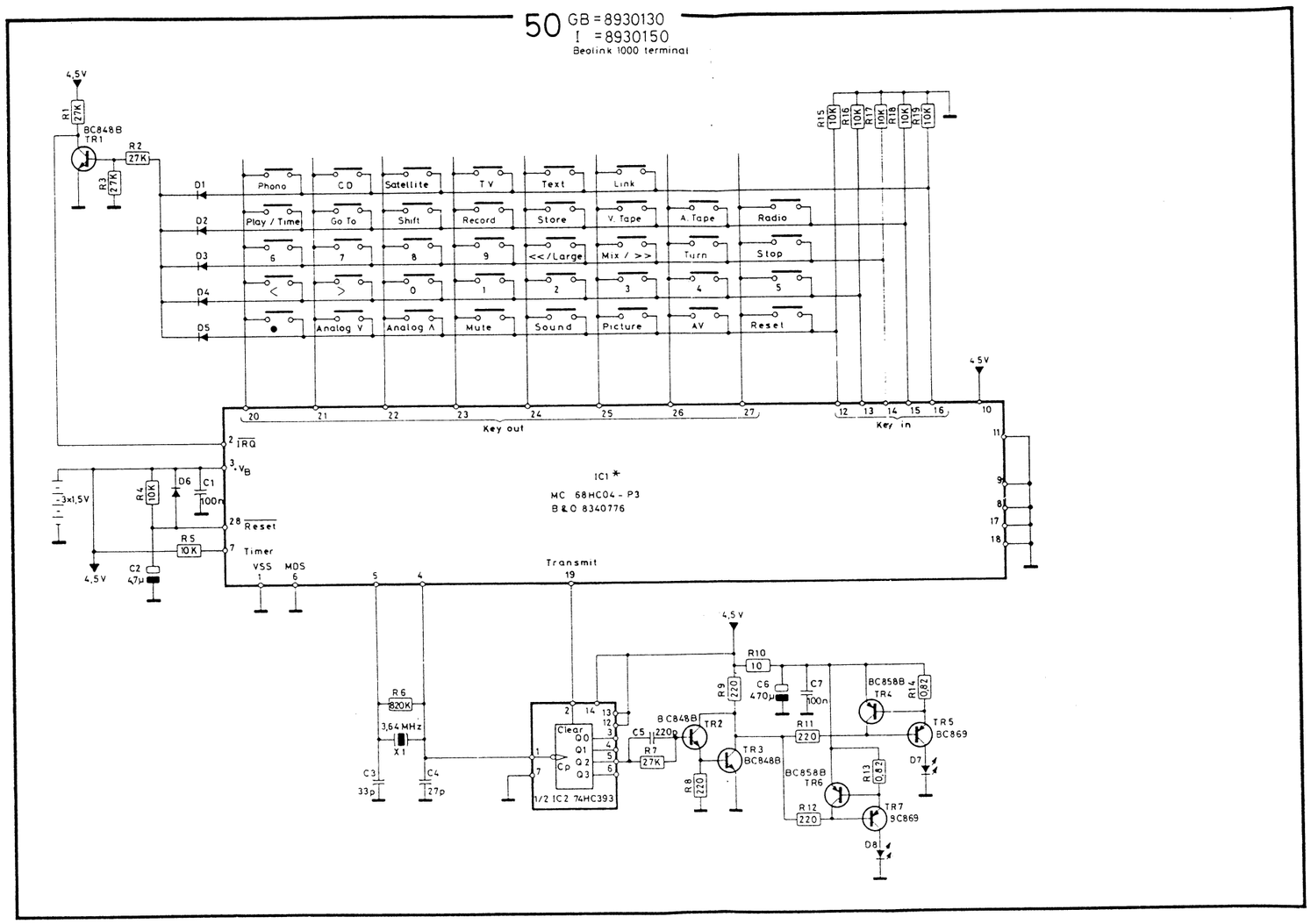
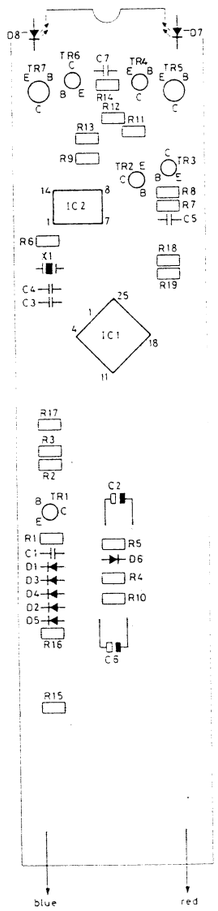


DIAGRAM H TELETEXT DECODER, DISPLAY (PCB 14 can be in set only if there is no teletext decoder)



50 GB = 8930130
I = 8930150
Beolink 1000 terminal

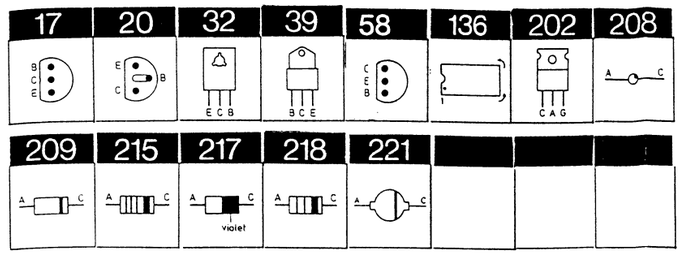




3-1

3-1

LIST OF ELECTRICAL PARTS



Resistors not referred to are standard, see page 3-12.

PCB 1, 8053219 Basic Board f/ITT picture tube, see page 7-1
PCB 1, 8053272 Basic Board f/VC picture tube, see page 7-1

IG01	8341199	**136**	TDA 8145
II36	8341107	**136**	TDA 4443
II71	8341115	**136**	TDA 4445B
IL14△	8341108	**136**	TEA 2029
IR01△	8341123	**136**	HD 404918 w/Teletext
△	8341124	**136**	HD 404918 w/Display
IT20△	8341109	**136**	TD 6316 B

TI16	8320782	**58**	BF 763	TI62	8320510	**20**	BC 558B
TI57*	8320783	**20**	BC 558A	TI68	8320510	**20**	BC 558B
TI60	8320497	**20**	BC 547B				
TL17	8320510	**20**	BC 558B	TL31*	8320800	**39**	BU 508A
TL29*	8320797	**17**	BC 639				
TP11	8320595	**20**	BC 337-40	TP19	8320781	**32**	BD 434
TP14	8320510	**20**	BC 558B	TP24*	8320800	**39**	BU 508A
TP15	8320509	**20**	BC 548B	TP45	8320430	**17**	BC 639
TP16	8320626	**17**	BC 368	TP48	8320391	**17**	BC 638
TR01	8320784	**20**	BC 328-40	TR57	8320510	**20**	BC 558B
TR06	8320784	**20**	BC 328-40	TR78	8320510	**20**	BC 558B
TR08	8320784	**20**	BC 328-40	TR80	8320509	**20**	BC 548B
TR11	8320784	**20**	BC 328-40	TR83	8320509	**20**	BC 548B
TR24	8320595	**20**	BC 337-40	TR84	8320784	**20**	BC 328-40
TR53	8320510	**20**	BC 558B				
TT02	8320510	**20**	BC 558B	TT12	8320497	**20**	BC 547B
TT06-TT08	8320510	**20**	BC 558B				
TV16	8320509	**20**	BC 548B				

DF17	8300058	**209**	1N 4148
DF18	8300058	**209**	1N 4148
DG10	8300173	**209**	ZPD 8.2
DG12	8300058	**209**	1N 4148
DG13	8300058	**209**	1N 4148
DI02	8300618	**209**	BA 282
DI06-DI08	8300058	**209**	1N 4148
DI22	8300618	**209**	BA 282
DI35	8300058	**209**	1N 4148
DI48	8300058	**209**	1N 4148

△ indicates that static electricity may destroy the component.

* Specially selected or adapted sample.

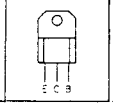
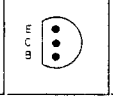
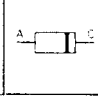
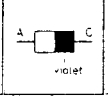
DL03	8300058	**209**	1N 4148
DL06	8300058	**209**	1N 4148
DL13	8300058	**209**	1N 4148
DL14	8300058	**209**	1N 4148
DL18	8300350	**209**	ZPD 36V
DL19	8300058	**209**	1N 4148
DL20	8300058	**209**	1N 4148
DL21	8300488	**202**	ESM 740
DL22	8300518	**217**	BA 157
DL23	8300058	**209**	1N 4148
DP06-DP09	8300612	**209**	BY 255
DP13	8300058	**209**	1N 4148
DP16	8300058	**209**	1N 4148
DP17-DP19	8300023	**209**	1N 4002
DP21	8300518	**217**	BA 157
DP23	8300613	**209**	BY 399
DP24	8300058	**209**	1N 4148
DP25	8300620	**209**	ZPD 4.3V 2%
DP26	8300518	**217**	BA 157
DP33	8300614	**221**	BYW 80-150
DR23	8300058	**209**	1N 4148
DR24	8300058	**209**	1N 4148
DR25	8300023	**209**	1N 4002
DR26	8300173	**209**	ZPD 8.2V
DR62	8300173	**209**	ZPD 8.2V
DT02	8300058	**209**	1N 4148
DT03	8300058	**209**	1N 4148
DT07	8300498	**215**	1N 4150
DT09	8300498	**215**	1N 4150
DL25	8300181	**218**	BA 220
DL28	8300058	**209**	1N 4148
DL38	8300058	**209**	1N 4148
DL41	8300610	**208**	BYW 76
DL46	8300304	**221**	BY 228
DL51	8300611	**209**	BY 397
DL52	8300518	**217**	BA 157
DL55	8300518	**217**	BA 157
DL57	8300619	**209**	ZPD 16
DP36	8300058	**209**	1N 4148
DP37	8300616	**209**	1N 5822
DP38	8300058	**209**	1N 4148
DP41	8300613	**209**	BY 399
DP43	8300518	**217**	BA 157
DP45	8300189	**209**	ZTK 11
DP46	8300023	**209**	1N 4002
DP47	8300023	**209**	1N 4002
DP51-DP54	8300023	**209**	1N 4002
DP56	8300727	**209**	ZPD 33V
DR77	8300058	**209**	1N 4148
DR78	8300058	**209**	1N 4148
DR81	8300479	**209**	ZPD 5.1V
DR83-DR85	8300058	**209**	1N 4148
DT14	8300210	**209**	ZPD 30V
DT21	8300498	**215**	1N 4150
DT22	8300498	**215**	1N 4150
DT23	8300479	**209**	ZPD 5.1V

RF01	5011615	3 MΩ	5% 1/2W
RF03	5020228	8.87 kΩ	1% 1/4W
RF04	5020212	4.02 kΩ	1% 1/4W
RF09	5021072	40.2 kΩ	1% 1/4W
RF10	5030031	Resistor network	
RG01	5020362	56.2 kΩ	1% 1/4W
RG03	5020291	3.32 kΩ	1% 1/4W
RI19	5011613	Resistor w/coil	
RI49	5021067	10 Ω	5% 0.3W
RI53	5020263	100 kΩ	1% 1/4W
RL10	5020263	100 kΩ	1% 1/4W
RL16	5020291	3.32 kΩ	1% 1/4W
RL22	5020738	470 Ω	5% 0.3W
RL29	5020709	100 Ω	5% 2W
RL30	5100203	0.47 Ω	10% 2W
RL42	5020547	68 Ω	5% 2W
RL44	5021062	56 Ω	5% 0.3W
RP02	5021098	10 MΩ	5% 1W
RP05	5104023	8.2 kΩ	5% 3W
RP19	5100358	3.9 Ω	5% 3W
RP21	5100359	0.05 Ω	
RP23	5100360	150 Ω	5% 7W
RT04	5021068	22 Ω	5% 0.3W
RT14	5011749	3.9 kΩ	5% 1W
RT16	5011749	3.9 kΩ	5% 1W
RV12	5021068	22 Ω	5% 0.3W
RF13	5021250	39.2 kΩ	1%
RF17	5011614	3.3 Ω	5% f/VC picture tube
	5011622	3 Ω	f/ITT picture tube
RG08	5021061	22 Ω	5% 0.4W
RI54	5020263	100 kΩ	1% 1/4W
RI56	5020110	10 kΩ	1% 1/4W
RI74	5020462	27 Ω	5% 0.3W
RL46	5021063	1 kΩ	10% 0.5W
RL50	5020755	1 Ω	10% 0.3W
RL53	5100357	150 Ω	5% 2W
RL56	5020543	22 Ω	5% 2W
RL57	5011034	2.2 kΩ	5% 1/2W
RL58	5021065	220 Ω	10% 0.5W
RP25	5100359	0.05 Ω	
RP28	5100360	150 Ω	5% 7W
RP37	5100362	0.034 Ω	
RP42	5021064	1 Ω	10% 0.3W
RT20	5002028	2.2 kΩ	10% 1W
RT23	5021066	22 Ω	10% 0.3W

PF02	5370372	1 kΩ	20%
PG02	5370308	2.2 kΩ	20%
PG08	5370310	100 kΩ	20%
P136	5370376	2.2 kΩ	20%
PL01	5370377	22 kΩ	20%
PF14	5370306	47 Ω	20%
PG12	5370308	2.2 kΩ	20%
PL15	5370378	22 kΩ	20%

CF01	4130438 470 nF 5% 63V	CF07	4130193 22 nF 20% 63V
CF06	4130193 22 nF 20% 63V	CF19	4000176 100 pF 5% 63V
CG01	4200561 10 µF 20% 50V	CG11	4010105 1 nF 10% 63V
CG02	4130311 680 nF 10% 63V	CG12	4100238 3.3 nF 5% 63V
CG06	4130235 47 nF 20% 63V		
CI01	4000086 5.6 pF ±0.25 pF 63V	CI47	4130230 100 nF 20% 63V
CI02-CI05	4010027 1 nF 10% 63V	CI48	4200129 100 µF -20+50% 16V
		CI49	4130193 22 nF 20% 63V
CI07	4000177 12 pF 5% 63V	CI50	4130235 47 nF 20% 63V
CI08-CI10	4010027 1 nF 10% 63V	CI51	4000363 47 pF 2% 63V
		CI53	4000135 150 pF 5% 63V
CI12	4000215 68 pF 5% 63V	CI54	4000135 150 pF 5% 63V
CI18	4130193 22 nF 20% 63V	CI55	4100228 330 pF 5% 63V
CI21	4000160 220 pF 5% 63V	CI56	4000176 100 pF 5% 63V
CI22	4100244 180 pF 5% 63V	CI58	4010027 1 nF 10% 63V
CI23	4000057 47 pF 5% 63V	CI60	4010027 1 nF 10% 63V
CI27	4130193 22 nF 20% 63V	CI62	4200517 2.2 µF 20% 50V
CI33	4200515 4.7 µF 20% 25V	CI66	4010106 10 nF -20+80% 40V
CI36	4200508 22 µF 20% 25V	CI73	4000057 47 pF 5% 63V
CI38	4000200 82 pF 5% 63V	CI74	4130193 22 nF 20% 63V
CI45	4130193 22 nF 20% 63V	CI75	4200544 22 µF 20% 16V
CI46	4200508 22 µF 20% 25V	CI76	4200561 10 µF 20% 50V
CL01	4200395 470 µF -10+50% 16V	CL26	4200517 2.2 µF 20% 50V
CL02	4130264 68 nF 10% 63V	CL27	4000160 220 pF 5% 63V
CL03	4000160 220 pF 5% 63V	CL29	4130382 56 nF 5% 63V
CL06	4010027 1 nF 10% 63V	CL33	4200510 10 µF 20% 16V
CL07	4100210 1.5 nF 5% 63V	CL36	4200488 22 µF 20% 25V
CL08	4100244 180 pF 5% 63V	CL41	4130439 20 nF 5% 400V
CL09	4200129 100 µF -20+50% 16V	CL43	4130437 220 nF 5% 250V
CL10	4010027 1 nF 10% 63V	CL44	4130436 440 nF 5% 250V
CL11	4130226 220 nF 10% 63V	CL48	4130435 11 nF 3.5% 1500V f/VC picture tube
CL13	4010188 2.2 nF 10% 63V		
CL15	4130216 22 nF 10% 63V		4130429 12 nF 2.5% 1500V f/ITT picture tube
CL16	4130440 3.3 nF 2.5%		
CL17	4130193 22 nF 20% 63V	CL51	4200512 1000 µF 16V
CL18	4010027 1 nF 10% 63V	CL52	4200622 1000 µF 40V
CL19	4130226 220 nF 10% 63V	CL54	4130163 680 nF 10% 250V
CL21	4200426 1 µF 20% 50V	CL55	4130434 330 pF 1000V
CL22	4010141 4.7 nF 10% 500V	CL56	4130441 10 nF
CL23	4200515 4.7 µF 20% 25V	CL58	4200584 47 µF 20% 100V
CL24	4130315 15 nF 5% 63V		
CP02	4020012 4.7 nF 20% 400V	CP27	4010062 330 pF 10% 63V
CP03	4200609 150 µF -20+50% 385V	CP29	4130235 47 nF 20% 63V
CP04	4200403 100 µF -10+100% 25V	CP31	4130230 100 nF 20% 63V
CP06	4130433 1.5 nF 1 kV	CP32	4200810 1000 µF 63V
CP07	4130432 1.5 nF 1 kV	CP33	4130434 330 pF 1000V
CP08	4130432 1.5 nF 1 kV	CP37	4200811 4700 µF 25V
CP14	4000057 47 pF 5% 63V	CP38	4010062 330 pF 10% 63V
CP15	4000176 100 pF 5% 63V	CP41	4200812 150 µF 150V
CP19	4200516 47 µF 20% 16V	CP42	4130430 100 pF 1 kV
CP23	4130431 2.2 nF 20% 1 kV	CP43	4130193 22 nF 20% 63V
CP24	4200584 47 µF 20% 100V	CP46	4200813 2200 µF 16V
CP26	4200704 470 µF 20% 25V		
CR07-CR18	4000176 100 pF 5% 63V	CR71	4010027 1 nF 10% 63V
		CR78	4130290 68 nF 20% 63V
CR25	4200813 2200 µF 16V	CR80	4010027 1 nF 10% 63V
CR26	4130193 22 nF 20% 63V	CR84	4200561 10 µF 20% 50V
CR27-CR29	4010027 1 nF 10% 63V	CR85	4200510 10 µF 20% 16V
		CR86	4130193 22 nF 20% 63V
CR32	4000176 100 pF 5% 63V	CR87	4000244 27 pF 5% 50V
CR38	4130220 10 nF 5% 63V	CR88	4000244 27 pF 5% 50V
CR59	4010027 1 nF 10% 63V	CR90	4130193 22 nF 20% 63V
CR61	4130220 10 nF 5% 63V		
CR66-CR70	4000160 220 pF 5% 63V		

Bang & Olufsen

17	20	44	49	209	217		
							

Resistors not referred to are standard, see page 3-12.

CT01	4130193 22 nF 20% 63V	CT15	4010024 470 pF 10% 63V
CT02	4010027 1 nF 10% 63V	CT16	4000176 100 pF 5% 63V
CT03	4010027 1 nF 10% 63V	CT17	4000120 6.8 pF ±0.25 pF 63V
CT04	4200516 47 µF 20% 16V	CT18	4000200 82 pF 5% 63V
CT05	4000176 100 pF 5% 63V	CT19	4000244 27 pF 5% 50V
CT06-CT08	4010027 1 nF 10% 63V	CT20	4010063 4.7 nF 10% 63V
		CT21	4000176 100 pF 5% 63V
CT10	4200600 470 µF 20% 16V	CT22	4010024 470 pF 10% 63V
CT11	4130234 470 nF 10% 63V	CT24	4130193 22 nF 20% 63V
CT12	4130306 100 nF 10% 63V	CT26	4100244 180 pF 5% 63V
CT13	4010027 1 nF 10% 63V	CT27	4010027 1 nF 10% 63V
CT14	4010027 1 nF 10% 63V	CT28	4000176 100 pF 5% 63V
CV01	4010024 470 pF 10% 63V	CV04	4010062 330 pF 10% 63V
CV02	4010024 470 pF 10% 63V	CV12	4200403 100 µF -10–100% 25V
CV03	4010062 330 pF 10% 63V		

LG11	8022285 Coil		
LI01	8022286 Coil 36 MHz	LI43	8020595 Coil 6.8 µH
LI02	8022287 Coil 36 MHz	LI48	8022290 Coil 22 µH
LI21	8022288 Coil 36 MHz	LI50	8022291 Coil 390 µH
LI22	8022289 Coil 36 MHz	LI72	8022293 Coil 38.9 MHz
LI41	8022293 Coil 38.9 MHz		
LL32	8022292 Coil	LL53	8014087 Transformer
LL35	8022311 Coil 4 µH	LL54	6710018 Ferrite core
LL46	8022312 Coil	LL55	8022314 Coil 75 µH
LL52	8022313 Coil 11 µH	LL56	8022315 Coil 40 µH
LP03	8013418 Transformer	LP39	6710019 Ferrite core
LP04	8014088 Transformer	LP40	6710019 Ferrite core
LP24	8022316 Coil 6 µH	LP43	6710019 Ferrite core
LP32	8014086 Transformer	LP44	6710019 Ferrite core
LT03	8022294 Coil 22 µH	LT21	8022294 Coil 22 µH
LT13	8022294 Coil 22 µH		

FI29	8030617 Filter OFWG 3204 f/type 3140-3141 8030081 Filter OFWG 3201 f/type 3143/44/45/46/47

QL07	8030084 Cer. res. 503 kHz
QR83	8030149 Cer. res. 4 MHz
QT16	8090079 Crystal 4 MHz

TU1	8050115 VHF tuner
TU2	8050116 UHF tuner

XR85	8700024 Battery 2.4V

BE01	7220551 Plug 14 pol		
BL04-BL09	7500013 Contact pin	BL46	7500013 Contact pin
		BL55	7500013 Contact pin
BL11	7500013 Contact pin		
BP02	7500013 Contact pin	BP10	7500013 Contact pin
BP06	7500013 Contact pin	BP11	7500013 Contact pin

BR02	7220462	Plug 3/3 pol	BR13	7500013	Contact pin
BR03-BR10	7500013	Contact pin			
BS15	7500013	Contact pin			
BV01	7220462	Plug 3/3 pol	BV07	7220739	Plug 4 pol
BV04	7220742	Plug 14 pol	BV10	7210750	Socket 21 pol scart
BV05	7220741	Plug 18 pol	BV11-BV13	7500013	Contact pin
BV06	7220740	Plug 13 pol			
	6275749	Mains cable w/holder			
	6270416	Focuscable			

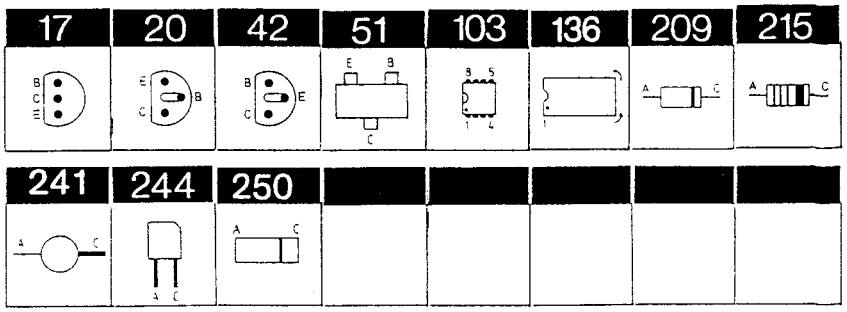
Watch dog

TR1-TR4	8320497	**20** BC 547B			
D1D4	8300058	**209** 1N 4148			
C1	4200512	1 µF 20% 50V			
C2	4010107	22 nF -20+80% 40V			
C3-C4	4200510	10 µF 20% 16V			

PCB 2, 8003823 Video Output

TR1	8320503	**20** BC 557B	TR22	8320505	**49** BF 422
TR11	8320440	**44** BF 869	TR23*	8320631	**17** BF 423
TR12	8320505	**49** BF 422	TR31	8320440	**44** BF 869
TR13*	8320631	**17** BF 423	TR32	8320505	**49** BF 422
TR21	8320440	**44** BF 869	TR33*	8320631	**17** BF 423
D1	8300194	**209** Z20V 5%	D23	8300533	**217** BA 157
D11-12	8300058	**209** 1N 4148	D31-32	8300058	**209** 1N 4148
D13	8300533	**217** BA 157	D33	8300533	**217** BA 157
D21-22	8300058	**209** 1N 4148			
R2	5020812	0.22 Ω 10% 0.4W	R25	5020774	47 kΩ 5% 1W
R3	5020495	10 Ω 10% 1W	R28	5370350	47 kΩ 20% 0.1W
R11	5020758	1 kΩ 5% 0.3W	R31	5020758	1 kΩ 5% 0.3W
R12	5020697	22 kΩ 5% 1W	R32	5020697	22 kΩ 5% 1W
R15	5020774	47 kΩ 5% 1W	R35	5020774	47 kΩ 5% 1W
R18	5370350	47 kΩ 20% 0.1W	R38	5370350	47 kΩ 20% 0.1W
R21	5020758	1 kΩ 5% 0.3W	R39	5390027	Focus + G2
R22	5020697	22 kΩ 5% 1W			
C1	4010123	1 nF 10% 500V	C12	4010105	1 nF 10% 63V
C2	4200626	33 µF 20% 250V	C21	4000204	100 pF 5% 63V
C3	4200628	100 µF 20% 16V	C22	4010105	1 nF 10% 63V
C4	4000155	56 pF 5% 63V	C31	4000204	100 pF 5% 63V
C5	4010165	10 nF 20% 2kV	C32	4010105	1 nF 10% 63V
C11	4000362	56 pF 5% 63V			
S1	7200067	Socket/picture tube			
	7210635	Socket/focus			
P1	7220428	Plug 6/6 pol			
P2	7210273	Socket 6/6 pol			
P3	7220624	Plug 6 pol			
P4	7220625	Plug 3 pol			
CP1	6031925	Lead to ground wire			
CP2	6031926	Lead to chassis			

* Specially selected or adapted sample.



Resistors not referred to are standard, see page 3-12.

PCB 5, 8003829 IR-Receiver

TR1	8320627	**20** BC 549B	TR4	8320510	**20** BC 558B
TR2	8320625	**42** BF 240	TR5	8320625	**42** BF 240
TR3	8320509	**20** BC 548B	TR67	8320509	**20** BC 548B

D1	8330145	**244** BPW 82
D2-5	8300058	**209** 1N 4148
D6-9	8330135	**241** GL-1 HD202

C1-2	4010128 470 pF 10% 63V	C9	4000193 47 pF 5% 63V
C3	4000193 47 pF 5% 63V	C10	4010128 470 pF 10% 63V
C4	4000139 100 pF 5% 63V	C11-12	4130233 220 nF 20% 63V
C5	4130313 470 nF 20% 63V	C13	4000193 47 pF 5% 63V
C6	4010128 470 pF 10% 63V	C14	4130315 15 nF 5% 63V
C7-8	4010103 2.2 nF 10% 63V		

L1	8020562 Coil 455 kHz

BP1	8030056 455 kHz ±1 kHz

P1	7220632 Plug 8 pol

PCB 7, 8003914 Teletext

IV25△	8340720	**136** SDA 5231	IV45△	8340885	**136** HM 6264 LP-15
IV35△	8341068	**136** SAA 5243	IV70	8340767	**103** TEA 2014

TR2	8320510	**20** BC 558B	TR7	8320202	**20** BC 557A
TR4	8320510	**20** BC 558B	TR8-12	8320755	**51** BC 847B
TR6	8320497	**20** BC 547B			
TV01	8320632	**17** BC 636	TV36	8320509	**20** BC 548B
TV03	8320509	**20** BC 548B	TV39	8320509	**20** BC 548B
TV06	8320509	**20** BC 548B	TV63	8320510	**20** BC 558B
TV21	8320509	**20** BC 548B	TV69	8320510	**20** BC 558B
TV33	8320509	**20** BC 548B	TV72	8320509	**20** BC 548B
TV34	8320509	**20** BC 548B	TV73	8320509	**20** BC 548B

D1	8300482	**250** LL 4148	D4	8300607	**250** Z 3.3V 5%
D2	8300605	**250** Z 10V 5%	D6	8300482	**250** LL 4148
DV06	8300498	**215** 1N 4150	DV64	8300058	**209** 1N 4148
DV08	8300479	**209** ZPD 5.1V 2%	DV66	8300498	**215** 1N 4150
DV11	8300498	**215** 1N 4150	DV68	8300498	**215** 1N 4150

RV10	5020812 0.22 Ω 10% 0.4W
RV11	5020657 4.7 Ω 10% 0.35W

△ indicates that static electricity may destroy the component.

C1	4000135 150 pF 5% 63V	C7	4010105 1 nF 10% 63V
C2	4000342 1 nF 10% 50V	C8	4010118 330 pF 10% 63V
C3	4200517 2.2 µF 20% 50V	C9	4200516 47 µF 20% 16V
C4	4000243 100 pF 5% 63V	C12	4000236 470 pF 10% 50V
C5	4000135 150 pF 5% 63V	C13-15	4010041 10 nF -20+80% 40V
C6	4010142 10 nF -20+80% 40V		

CV01	4200395 470 µF -10+50% 16V	CV25	4000133 15 pF 5% 63V
CV06	4200544 22 µF 20% 16V	CV27	4010081 270 pF 10% 63V
CV09	4200483 47 µF 20% 16V	CV28	4130193 22 nF 20% 63V
CV10	4200380 1 µF -20+50% 63V	CV29	4010024 470 pF 10% 63V
CV11	4200483 47 µF 20% 16V	CV31	4010027 1 nF 10% 63V
CV12	4130193 22 nF 20% 63V	CV32	4000133 15 pF 5% 63V
CV13	4200487 10 µF 20% 50V	CV33	4130220 10 nF 5% 63V
CV14	4130193 22 nF 20% 63V	CV34	4130193 22 nF 20% 63V
CV15	4201069 2.2 µF 20% 35V	CV35	4200510 10 µF 20% 16V
CV16	4130270 68 nF 5% 63V	CV36	4000176 100 pF 5% 50V
CV17	4000160 220 pF 5% 63V	CV37	4200510 10 µF 20% 16V
CV18	4130308 220 nF 10% 63V	CV66	4200510 10 µF 20% 16V
CV19	4130223 47 nF 10% 63V	CV67	4130193 22 nF 20% 63V
CV20	4000030 15 pF 5% 63V	CV68	4200484 10 µF 20% 25V
CV21	4200519 1 µF 20% 35V	CV70	4200510 10 µF 20% 16V
CV22	4010106 10 nF -10+80% 40V	CV71	4200510 10 µF 20% 16V
CV23	4130193 22 nF 20% 63V	CV76	4130346 330 nF 10% 63V
CV24	4000244 27 pF 5% 50V		

LV10	8020582 Coil 10 µH
LV11	8020582 Coil 10 µH
LV24	8020554 Coil 15 µH

QV24	8090041 Crystal 13.87 MHz
QV26	8020930 Coil 35 µH

XV74	8700018 Battery 2.4V

BV06	7210627 Socket 13 pol	BV11	7500013 Contact pin
BV07	7210628 Socket 4 pol		

PCB 9, 8003824 P-Step/
Mains Filter
PCB 9, 8003905 P-Step/
Mains Filter Australia

R1	5011209 10 MΩ 5% 1/2W
R2	5020877 12 Ω 10% 0.25W
R5	5230009 PTC 40 + 1000 Ω 265V

C1	4130279 100 nF 20% 275V
C2-3	4010041 10 nF -20+80% 40V
C4	4130100 68 nF 10% 250V

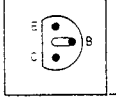
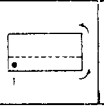
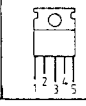
L1-2	8022268 Coil 2 x 36mH
L3	8022269 Coil 2 x 0.4mH

RL1	7600090 Relay 12V

F1	6600009 Fuse 2A-T/250V
	7200066 Fuse holder

S6	7400318 Switch 1 pol

P1	7220630 Plug 10 pol
P2-3	7220424 Plug 2/2 pol
P7	7210386 Jack socket

20	101	103	120	136	138	143	209
							

Resistors not referred to are standard, see page 3-12.

PCB 12, 8003830 Interface Audio/Data

IC1-2	8340340 **101** CD 4053 BCN		
TR1-2	8320509 **20** BC 548B		
TR100-106	8320509 **20** BC 548B		
D1	8300173 **209** Z8.2V 5%	D102	8300544 **209** BAT 85
D2	8300201 **209** Z6.2V 5%	D103	8300544 **209** BAT 85
D3	8300058 **209** 1N 4148	D104-106	8300058 **209** 1N 4148
D100	8300201 **209** Z6.2V 5%		
D101	8300058 **209** 1N 4148	D107	8300544 **209** BAT 85
C1	4200512 1 µF 20% 50V	C10	4200510 10 µF 20% 16V
C2	4200510 10 µF 20% 16V	C11	4200395 470 µF -10-50% 16V
C3	4200512 1 µF 20% 50V	C14	4010105 1 nF 10% 63V
C4-5	4200510 10 µF 20% 16V	C15	4200517 2.2 µF 20% 50V
C6	4200628 100 µF 20% 16V	C100	4130262 22 nF 20% 63V
C7-9	4200517 2.2 µF 20% 50V		
P1	7220551 Plug 14 pol	P3	7220319 Plug 8 pol
P2	7220318 Plug 6 pol	P5	7220629 Plug 9 pol
CP2	7500013 Contact plug		

PCB 13, 8003831 A/V Connections

C1-8	4010041 10 nF -20+80% 40V		
P1	7220439 Plug 14/14 pol		

PCB 14, 8003828 Display

IC1	8340175 **101** CD 4015 CN		
IC2	8340721 **138** MB 88303		
TR1-4	8320509 **20** BC 548B	TR8-9	8320510 **20** BC 558B
TR5	8320510 **20** BC 558B	TR10	8320497 **20** BC 547B
TR6-7	8320512 **20** BC 338-25	TR11	8320202 **20** BC 557A
D1	8300296 **209** Z5.6V 2%	D5	8300058 **209** 1N 4148
D2-3	8300058 **209** 1N 4148	D6	8300201 **209** Z6.2V 5%
D4	8300173 **209** Z8.2V 5%	D7	8300058 **209** 1N 4148
R1	5020701 12 Ω 5% 1W		
C1-2	4130230 100 nF 20% 63V	C10	4010105 1 nF 10% 63V
C3	4010105 1 nF 10% 63V	C11	4200517 2.2 µF 20% 50V
C4	4000142 82 pF 5% 63V	C12	4000204 100 pF 5% 63V
C5	4200617 47 µF 20% 10V	C13	4000135 150 pF 5% 63V
C6	4010105 1 nF 10% 63V	C14	4010142 10 nF -20+80% 40V
C7	4030023 47 nF -20+80% 16V	C15	4010105 1 nF 10% 63V
C8	4010118 330 pF 10% 63V	C16	4010118 330 pF 10% 63V
C9	4000135 150 pF 5% 63V	C17	4200726 47 µF 20% 16V
P1	7210628 Socket 4 pol		
P2	7210627 Socket 13 pol		

PCB 20, 8007089
Sound B/G/I/L/M

IS01	8340086 **120** TBA 120UB	IS63	8340500 **143** TDA 2040
IS21	8340938 **136** TDA 8405	IS73	8340500 **143** TDA 2040
IS33	8340790 **103** MC 4558	IS88	8340086 **120** TBA 120 UB
IS53	8341037 **136** TDA 8421		

TS47	8320503 **20** BC 557B
TS54	8320512 **20** BC 338

DS01	8300058 **209** 1N 4148	DS73	8300023 **209** 1N 4001
DS41	8300058 **209** 1N 4148	DS75	8300023 **209** 1N 4001
DS45	8300058 **209** 1N 4148	DS81	8300058 **209** 1N 4148
DS68	8300023 **209** 1N 4001	DS82	8300058 **209** 1N 4148
DS69	8300023 **209** 1N 4001	DS88	8300058 **209** 1N 4148

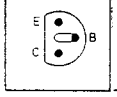
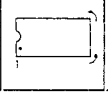
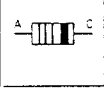
RS41	5020746 100 Ω 5% 0.3W	RS70	5020962 4.7 Ω 5% 0.5W
RS46	5020744 39 Ω 5% 0.33W	RS73	5020962 4.7 Ω 5% 0.5W
RS53	5021070 22 Ω 5% 0.3W	RS93	5020760 33 Ω 5% 0.3W
RS65	5001034 2.2 kΩ 10% 1/2W	RS95	5020760 33 Ω 5% 0.3W

PS92	5370315 22 kΩ 20%

CS01	4130193 22 nF 20% 63V	CS52	4010188 2.2 nF 10% 63V
CS02	4130193 22 nF 20% 63V	CS53	4200637 100 µF -10+100% 16V
CS03	4100255 560 pF 5% 63V	CS54	4200637 100 µF -10+100% 16V
CS05	4200510 10 µF 20% 16V	CS55	4010182 3.9 nF 10% 50V
CS06	4130193 22 nF 20% 63V	CS56	4130302 33 nF 10% 63V
CS07	4010188 2.2 nF 10% 63V	CS57	4200508 22 µF 20% 25V
CS08	4200646 22 nF 1% 63V	CS58	4130347 5.6 nF 10% 63V
CS09	4200129 100 µF -20+50% 16V	CS59	4130347 5.6 nF 10% 63V
CS10	4200646 22 nF 1% 63V	CS60	4130302 33 nF 10% 63V
CS13	4000194 56 pF 5% 50V	CS61	4010182 3.9 nF 10% 50V
CS14	4130300 68 nF 20% 63V	CS62	4200403 100 µF -10+100% 25V
CS15	4130300 68 nF 20% 63V	CS63	4010027 1 nF 10% 63V
CS16	4200129 100 µF -20+50% 16V	CS64	4010065 2.7 nF 10% 63V
CS17	4100260 2.2 nF 2.5% 63V	CS65	4130315 15 nF 5% 63V
CS18	4100032 33 nF 1% 63V	CS66	4130313 470 nF 20% 63V
CS19	4010027 1 nF 10% 63V	CS67	4200843 3300 µF -10+50% 50V
CS20	4200510 10 µF 20% 16V	CS68	4130313 470 nF 20% 63V
CS21	4010027 1 nF 10% 63V	CS69	4200816 2200 µF 35V
CS22	4100032 33 nF 1% 63V	CS70	4200508 22 µF 20% 25V
CS23	4200510 10 µF 20% 16V	CS71	4130315 15 nF 5% 63V
CS26	4200515 4.7 µF 20% 25V	CS72	4200544 22 µF 20% 16V
CS27	4010027 1 nF 10% 63V	CS73	4010027 1 nF 10% 63V
CS28	4010027 1 nF 10% 63V	CS74	4200816 2200 µF 35V
CS29	4130313 470 nF 20% 63V	CS75	4130313 470 nF 20% 50V
CS30	4130235 47 nF 20% 63V	CS76	4010065 2.7 nF 10% 63V
CS31	4100032 33 nF 1% 63V	CS77	4130308 220 nF 20% 63V
CS32	4130220 10 nF 5% 63V	CS78	4130308 220 nF 20% 63V
CS33	4200313 2.2 µF -10+100% 63V	CS79	4130300 68 nF 20% 63V
CS34	4200516 47 µF 20% 16V	CS80	4100255 560 pF 5% 63V
CS35	4000176 100 pF 5% 63V	CS81	4200313 2.2 µF -10+100% 63V
CS36	4130220 10 nF 5% 63V	CS82	4200313 2.2 µF -10+100% 63V
CS37	4200516 47 µF 20% 16V	CS83	4130193 22 nF 20% 63V
CS38	4200313 2.2 µF -10+100% 63V	CS86	4100055 470 pF 2.5% 63V
CS39	4000176 100 pF 5% 63V	CS87-89	4130193 22 nF 20% 63V
CS40	4100032 33 nF 1% 63V		
CS42	4200368 100 µF -10+100% 63V	CS90	4130300 68 nF 20% 63V
CS43	4010101 4.7 nF 10% 63V	CS91	4010188 2.2 nF 10% 63V
CS44	4200368 100 µF -10+100% 63V	CS92	4200510 10 µF 20% 16V
CS45	4200313 2.2 µF -10+100% 63V	CS93	4130193 22 nF 20% 63V
CS46	4200129 100 µF -20+50% 16V	CS94	4200637 100 µF -10+100% 16V
CS47	4200510 10 µF 20% 16V	CS95	4130193 22 nF 20% 63V
CS48	4200510 10 µF 20% 16V	CS96	4200637 100 µF -10+100% 16V
CS49	4130308 220 nF 10% 63V	CS97	4010027 1 nF 10% 63V
CS50	4130308 220 nF 10% 63V	CS98	4010027 1 nF 10% 63V
CS51	4010188 2.2 nF 10% 63V	CS99	4130313 470 nF 20% 50V

LS03	8030083 Coil 5.5 MHz	LS74	6710020 Ferrite core
LS17	8022244 Coil 54.687 kHz	LS80	8030083 Coil 5.5 MHz
LS69	6710020 Ferrite core	LS86	8030083 Coil 5.5 MHz

AM/FM Sound 8007090

20	42	136	209	215			
							

Resistors not referred to are standard, see page 3-12.

QS06	8030085 Cer. filter 5.742 MHz		
QS86	8030091 Cer. filter 6.0 MHz		
QS89	8030086 Cer. filter 5.5 MHz		
BS01	7220652 Plug 5 pol	BS20	7220652 Plug 5 pol
BS13	7220752 Plug 2 pol red	BS36	7220625 Plug 3 pol
BS14	7220753 Plug 2 pol green	BS45	7220652 Plug 5 pol
BS15	7210730 Socket 3 pol		
	7210731 Socket 8 pol		
	7210732 Socket 10 pol		
IX28	8341115 **136** TDA 4445		
IX46	8341116 **136** TDA 120T		
TX14	8320554 **42** BF 199	TX52	8320509 **20** BC 548B
TX44	8320509 **20** BC 548B	TX58	8320509 **20** BC 548B
DX01	8300387 **215** BA 244	DX56-DX59	8300058 **209** 1N 4148
DX08	8300387 **215** BA 244		
DX18	8300387 **215** BA 244		
RX13	5020756 10 Ω 5% 0.3W		
PX39	5370379 47 kΩ		
CX01	4100233 150 pF 5% 63V	CX31	4200168 4.7 µF -10-100% 63V
CX02	4000019 68 pF 5% 63V	CX32	4000025 15 pF 5% 63V
CX04	4000177 12 pF 5% 63V	CX33	4100247 1.8 nF 5% 63V
CX06	4000366 2.7 pF 63V	CX36	4130193 22 nF 20% 63V
CX07	4000019 68 pF 5% 63V	CX37	4130193 22 nF 20% 63V
CX08	4000177 12 pF 5% 63V	CX39	4010063 4.7 nF 10% 63V
CX11	4000365 27 pF 63V	CX41	4130233 220 nF 20% 63V
CX14	4000120 6.8 pF ±0.25 pF 63V	CX42	4000160 220 pF 5% 63V
CX17	4130193 22 nF 20% 63V	CX43	4200168 4.7 µF -10-100% 63V
CX18	4000179 120 pF 5% 63V	CX44	4200516 47 µF 20% 16V
CX19	4000019 68 pF 5% 63V	CX46	4130193 22 nF 20% 63V
CX21	4130193 22 nF 20% 63V	CX47	4130193 22 nF 20% 63V
CX24	4200516 47 µF 20% 16V	CX48	4130313 470 nF 20% 63V
CX26	4130193 22 nF 20% 63V	CX49	4100247 1.8 nF 5% 63V
CX27	4000183 22 pF 5% 63V	CX51	4200510 10 µF 20% 16V
CX29	4200510 10 µF 20% 16V		
LX03	8020722 Coil 39.2 MHz	LX22	8020722 Coil 39.2 MHz
LX09	8020722 Coil 39.2 MHz	LX28	8020722 Coil 39.2 MHz
QX34	8030154 Cer. filter 4.5 MHz		
QX38	8030155 Cer. filter 4.5 MHz		
BX58	7500013 Contact pin		

PCB 40, 8007091
Pal/Secam Decoder

IC01Δ	8340786 **136** TDA 4556	
IV21Δ	8341114 **136** HA 11498	

TC29	8320509 **20** BC 548B	
TC34	8320509 **20** BC 548B	
TC41	8320509 **20** BC 548B	
TV49	8320510 **20** BC 558B	TV71 8320509 **20** BC 548B
TV50	8320510 **20** BC 558B	TV72 8320509 **20** BC 548B
TV56	8320509 **20** BC 548B	TV74 8320510 **20** BC 558B

DV24	8300029 **209** ZPD 12V
DV58	8300058 **209** 1N 4148
DV70	8300058 **209** 1N 4148

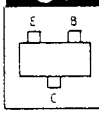
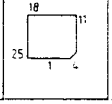
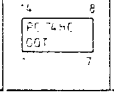
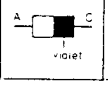
RC21	5020745 15 Ω 5% 0.3W
RV51	5020756 10 Ω 5% 0.3W

PC18	5370321 220 Ω 20%
PV38	5370308 2.2 kΩ 20%
PV44	5370308 2.2 kΩ 20%

CC01	4010219 180 pF 50V	CC18	4130230 100 nF 20% 50V
CC02	4000183 22 pF 5% 63V	CC19	4130220 10 nF 5% 63V
CC03	4000215 68 pF 5% 63V	CC22	4000207 33 pF 5% 63V
CC04	4000215 68 pF 5% 63V	CC23	4100233 150 pF 5% 63V
CC05	4010219 180 pF 50V	CC24	4000244 27 pF 5% 50V
CC06	4000183 22 pF 5% 63V	CC25	4000176 100 pF 5% 63V
CC07	4000160 220 pF 5% 63V	CC26	4000176 100 pF 5% 63V
CC08	4100244 180 pF 5% 63V	CC27	4000200 82 pF 5% 63V
CC09	4130193 22 nF 20% 63V	CC28	4000191 47 pF 5% 63V
CC11	4130236 330 nF 20% 63V	CC29	4130223 47 nF 10% 63V
CC12	4340027 4-40 pF	CC31	4130236 330 nF 20% 63V
CC13	4130193 22 nF 20% 63V	CC32	4130233 220 nF 20% 63V
CC14	4010027 1 nF 10% 63V	CC33	4200312 1000 µF -10+100% 16V
CC15	4100244 180 pF 5% 63V	CC34	4000160 220 pF 5% 63V
CC16	4130220 10 nF 5% 63V		
CV21-CV23	4130193 22 nF 20% 63V	CV44	4200431 10 µF 20% 16V
		CV46	4130220 10 nF 5% 63V
CV24	4200510 10 µF 20% 16V	CV47	4200395 470 µF -10+50% 16V
CV25-CV27	4130193 22 nF 20% 63V	CV49	4130235 47 nF 20% 50V
		CV54	4000188 39 pF 5% 63V
CV29	4200515 4.7 µF 20% 25V	CV55	4130193 22 nF 20% 63V
CV31-CV33	4130230 100 nF 20% 63V	CV56	4000215 68 pF 5% 63V
		CV57	4130193 22 nF 20% 63V
CV34	4130304 22 nF 10% 63V	CV61	4130193 22 nF 20% 63V
CV35	4130230 100 nF 20% 63V	CV62	4100233 150 pF 5% 63V
CV36	4130193 22 nF 20% 63V	CV63	4010031 680 pF 10% 63V
CV37	4130230 100 nF 20% 63V	CV64	4100233 150 pF 5% 63V
CV38	4130193 22 nF 20% 63V	CV66	4200510 10 µF 20% 16V
CV39	4230230 100 nF 20% 63V	CV67	4000176 100 pF 5% 63V
CV41	4000160 220 pF 5% 63V	CV68	4000365 27 pF 5% 63V
CV42	4130220 10 nF 5% 63V	CV69	4000191 47 pF 5% 63V
CV43	4200483 47 µF 20% 16V	CV71	4010081 270 pF 10% 63V

LC01	8020717 Coil 4.43 MHz	LC18	8020552 Coil 10 µH
LC05	8020717 Coil 4.43 MHz	LC23	8020720 Coil 4.43 MHz
LC14	8020718 Coil 4.43 MHz	LC24	8020724 Coil 56 µH
LC17	8020719 Coil 4.43 MHz	LC28	8020554 Coil 15 µH
LV56	8030083 Coil 5.5 MHz		
LV57	8020721 Coil 22 µH		
LV64	8020723 Coil 5.5 MHz		
LV68	8020606 Coil 27 µH		

Bang & Olufsen

51	52	144	145	203	217		
							

Resistors not referred to are standard, see page 3-12.

VC17	6240019 Delay line		
VV53	6240029 Delay line		
QC11	8090049 Crystal 8.8 MHz		
BV02	7220624 Plug 6 pol		
BV04	7210728 Socket 14 pol		
BV05	7210729 Socket 18 pol		

PCB 50, 8003894, Beolink 1000

IC1*	8340776 **144** 68 HC04 P3		
IC2	8340830 **145** 74 HC 393		
TR1-3	8320615 **51** BC 848B	TR6	8320616 **51** BC 858B
TR4	8320616 **51** BC 858B	TR7	8320684 **52** BC 869
TR5	8320684 **52** BC 869		
D1-6	8300482 **217** LL4148		
D7-8	8330140 **203** TSHA 5502		
R13-14	5011281 0.82 Ω 5% 1/4W		
C1	4010166 100 nF -20+80% 50V	C5	4000321 220 pF 5% 50V
C2	4200515 4.7 µF 20% 25V	C6	4200664 470 µF 20% 6.3V
C3	4000239 33 pF 5% 50V	C7	4010166 100 nF -20+80% 50V
C4	4000278 27 pF 5% 50V		
X1	8030094 Crystal 3.64 MHz 0.3%		

* Specially selected or adapted sample.

Standard Resistsors:

Resistors 5% 1/2 W

	x1	x10	x100	x1K	x10K	x100K	x1M	x10M
1.0		5011000	5011013	5011028	5011044	5010313	5011069	5011083
1.2	5011406	5011001	5011014	5011030	5011045	5011058	5010421	
1.5	5010727	5011002	5011015	5011031	5011046	5011059	5011071	
1.8	5010857	5010787	5011016	5011033	5011047		5011072	
2.2	5011335	5010708	5010815	5011034	5011048	5011061	5011074	
2.7		5010803	5011018	5010055	5011049	5011062	5011075	
3.3	5010255	5011007	5011019	5011037		5011063	5010381	
3.9		5010782	5011021	5010700	5011051		5010392	
4.7	5010765	5011009	5011022	5010035	5010036	5011065	5011078	
5.6		5011010	5011023	5011041		5011066	5011079	
6.8	5010874	5011011	5011024	5011042	5010810	5011067	5011080	
8.2		5011012	5011026	5011043	5010038	5011068	5011081	

Resistors 5% 1/4 W

	x1	x10	x100	x1K	x10K	x100K	x1M	x10M
1.0	5010592	5010506	5010065	5010040	5010059	5010049	5010054	5010638
1.2		5010595	5010128	5010153	5010046	5010047	5010665	
1.5	5011348	5010468	5010057	5010247	5010053	5010063	5010093	
1.8		5010822	5010362	5010066	5010135	5010072	5010791	
2.2	5010682	5010448	5010092	5010064	5010079	5010120	5010245	
2.7	5010925	5010403	5010000	5010298	5010141	5010083	5010431	
3.3		5010253	5010044	5010076	5010075	5010117	5010848	
3.9	5011377	5010622	5010070	5010069	5010060	5010073	5010714	
4.7	5010888	5010411	5010058	5010048	5010045	5010077	5011513	
5.6	5010706	5010151	5010067	5010041	5010061	5010071	5010658	
6.8	5010904	5010039	5010144	5010052	5010062	5010074		
8.2	5010880	5010056	5010068	5010154	5010091	5010505		

Resistors 5% 1/8 W

	x1	x10	x100	x1K	x10K	x100K	x1M	x10M
1.0		5011464	5011357	5010816	5010935	5011440	5011459	5020875
1.2		5011351	5011084	5011442	5011338	5011341	5011175	
1.5		5011463	5011443	5011178	5011364	5011398	5011460	
1.8			5011350	5011361	5011344	5011468		
2.2	5011032	5011376	5010886	5011353	5010833	5011369	5011342	
2.7		5011471	5011355	5011362	5011366	5011370	5011478	
3.3			5011337	5010827	5011346	5011371	5011462	
3.9		5011438		5011157	5011457	5011372	5020876	
4.7	5011363	5011038	5011441	5011363	5010937	5011343		
5.6		5011412	5011358	5010885	5011166	5011340		
6.8		5011356	5011336	5010839	5011367	5011458		
8.2		5011466	5011354	5011339	5011368	5011373		

Resistors SMD 2% 1/8 W
SMD 5% 1/8 W

	5%	2%	2%	2%	2%	2%	5%	5%
	x1	x10	x100	x1K	x10K	x100K	x1M	x10M
1.0	5011623	5011647	5011218	5011227	5011241	5011256	5011267	5011730
1.1	5011624	5011648	5011669	5011681	5011689	5011694	5011707	
1.2	5011625	5011649	5011219	5011682	5011490	5011257	5011708	
1.3	5011626	5011650	5011670	5011683	5011242	5011258	5011709	
1.5	5011627	5011651	5011220	5011228	5011243	5011259	5011710	
1.6	5011628	5011652	5011671	5011684	5011690	5011695	5011711	
1.8	5011629	5011653	5011672	5011229	5011244	5011260	5011712	
2.0	5011630	5011654	5011673	5011685	5011691	5011696	5011713	
2.2	5011216	5011655	5011674	5011230	5011245	5011261	5011714	
2.4	5011634	5011656	5011675	5011686	5011246	5011697	5011715	
2.7	5011635	5011657	5011497	5011231	5011247	5011262	5011716	
3.0	5011731	5011658	5011499	5011500	5011692	5011698	5011717	
3.3	5011217	5011659	5011676	5011232	5011248	5011263	5011718	
3.6	5011636	5011660	5011677	5011687	5011249	5011264	5011719	
3.9	5011637	5011661	5011221	5011233	5011491	5011699	5011720	
4.3	5011638	5011662	5011498	5011688	5011492	5011700	5011721	
4.7	5011639	5011269	5011222	5011234	5011250	5011265	5011722	
5.1	5011640	5011663	5011678	5011235	5011493	5011701	5011723	
5.6	5011641	5011664	5011223	5011236	5011251	5011702	5011724	
6.2	5011642	5011665	5011224	5011237	5011693	5011703	5011725	
6.8	5011643	5011666	5011225	5011238	5011252	5011704	5011726	
7.5	5011644	5011667	5011679	5011239	5011253	5011705	5011727	
8.2	5011645	5011270	5011226	5011240	5011254	5011266	5011728	
9.1	5011646	5011668	5011680	5011489	5011255	5011706	5011729	

(Glue dots, approx. 200, part no. 3181932).

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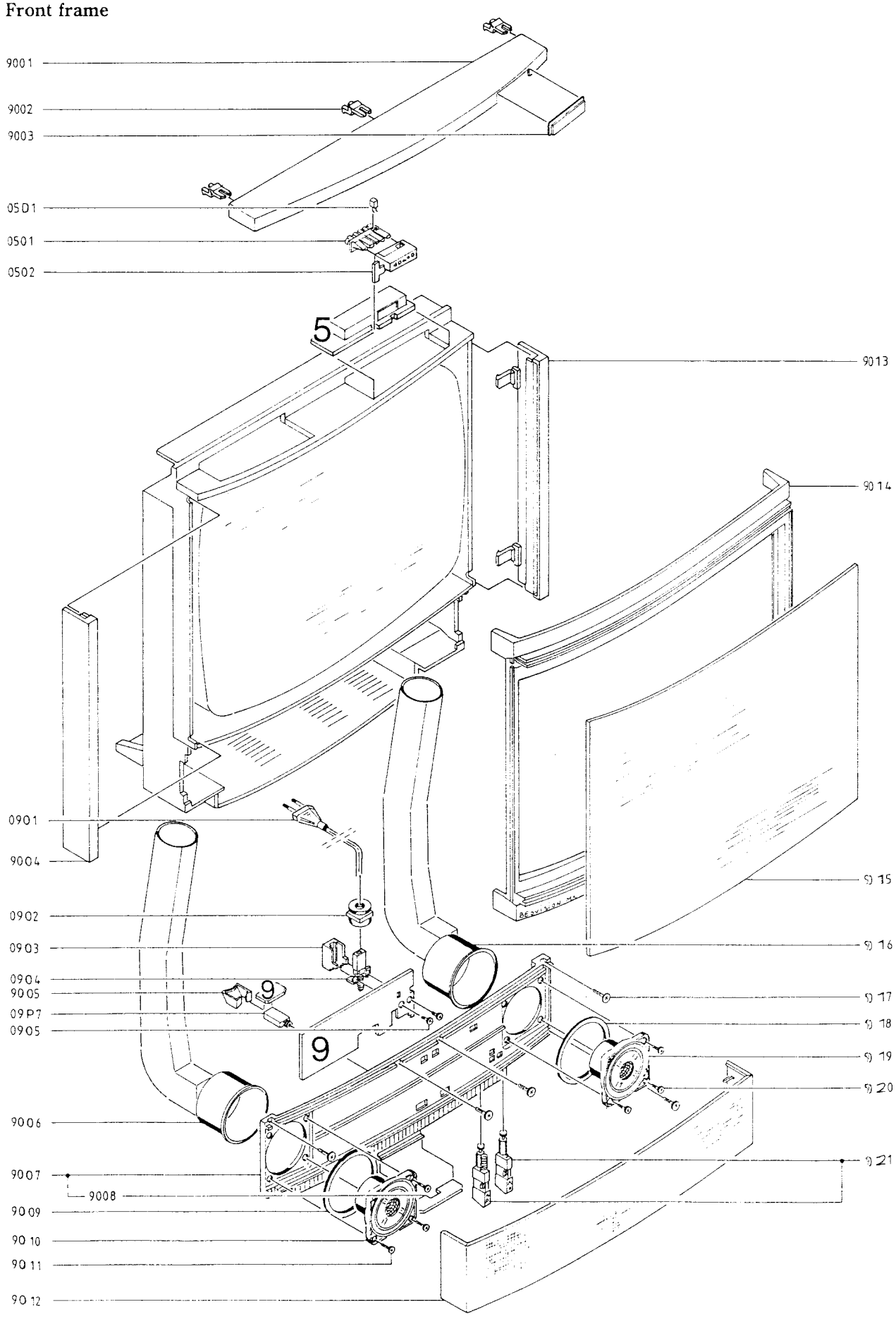
LIST OF MECHANICAL PARTS
Front frame



Front frame

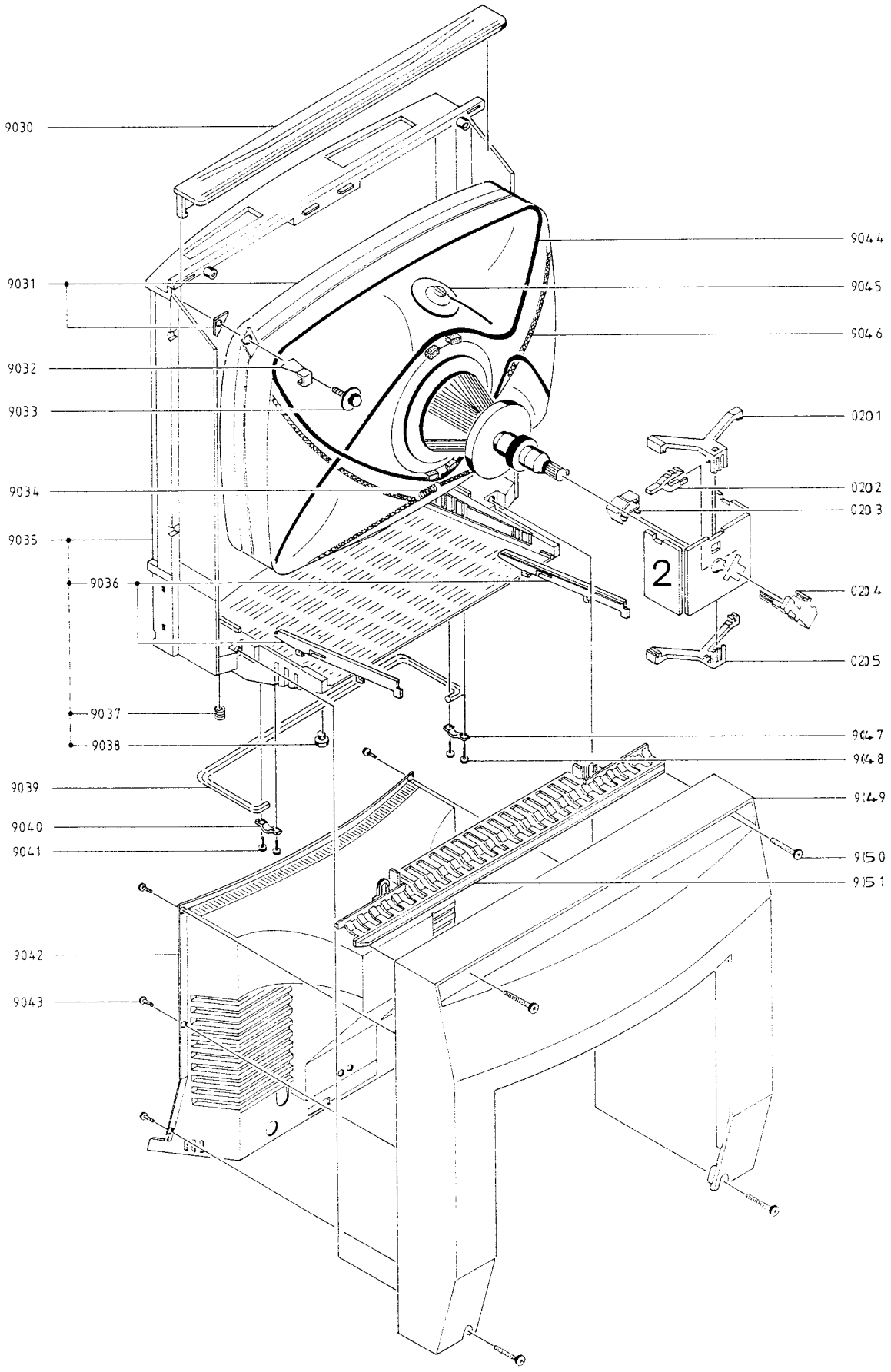
05Modul	8003829	PCB 5, IR-Receiver
0501	3375050	Lense
0502	3131313	Housing
05D1	8330145	Diode BPW 82

09Modul	8003824	PCB 9, P-Step/Mains Filter
	8003905	PCB 9, P-Step/Mains Filter Australia
0901	6271102	Mains lead w/euro plug
	6270297	Mains lead f/Australia
0902	2641119	Bushing f/mains cable
0903	3164613	Cap f/mains switch
0904	7450048	Mains switch
0905	2039026	Screw 3 x 4 mm
09P7	7210386	Jack plug

9001	3164644	Lid
9002	2391070	Hinge
9003	3322092	Window
9004	3470193	Side plate
	3950028	Rubber string
9005	2510160	Clips
9006	3132113	Loudspeaker damping tube/left
9007	3440107	Loudspeaker baffle w/foot
9008	3103286	Foot
9009	3340047	Gasket
9010	8480164	Loudspeaker
	6275816	Lead black/brown
	6275817	Lead red/brown
9011	2013123	Screw 3 x 10 mm
9012	3450704	Loudspeaker panel
9013	3470193	Side plate
	3950028	Rubber string
9014	3320114	Front frame
	3950020	Rubber string
9015	3450703	Contrast screen
9016	3132114	Loudspeaker damping tube/right
9017	2019009	Screw 4 x 12 mm
9018	3340047	Gasket
9019	8480164	Loudspeaker
9020	2013123	Screw 3 x 10 mm
9021	2776083	Press buttons, complete

Bang & Olufsen

Cabinet



Cabinet

02Modul	8003823	PCB 2, Video Output
0201	3152558	Holder
0202	3152583	Holder f/focuscontact
0203	3164679	Cap f/picture tube socket
0204	7210635	Focus socket
0205	3152558	Holder

9030	2530536	Carrying handle
9031	8200059	Picture tube – Video Color, see page 7-1
	8200062	Picture tube – ITT, see page 7-1
9032	2514066	Hook f/picture tube
9033	2044048	Screw/picture tube
9034	2810189	Spring
9035	3320129	Bottom/front part
	3946094	Tightening rail
9036	3151222	Guide rail
9037	2389051	Drive fit nut
9038	3035053	Rubber foot
9039	3103261	Tilting foot
9040	2641114	Fitting
9041	2019009	Screw 4 x 12 mm
9042	3430461	Back cover
	3911106	Cloth
9043	2019010	Screw 4 x 8 mm
9044	8022267	Degaussing coil
9045	6270364	EHT cable
9046	7510035	Ground current
9047	2641114	Fitting
9048	2019009	Screw 4 x 12 mm
9049	3414164	Back cover, red
	3414165	Back cover, white
	3414166	Back cover, black
	3414167	Back cover, grey
	3414168	Back cover, blue
9050	2021007	Screw 5 x 30 mm
9051	3444182	Grill

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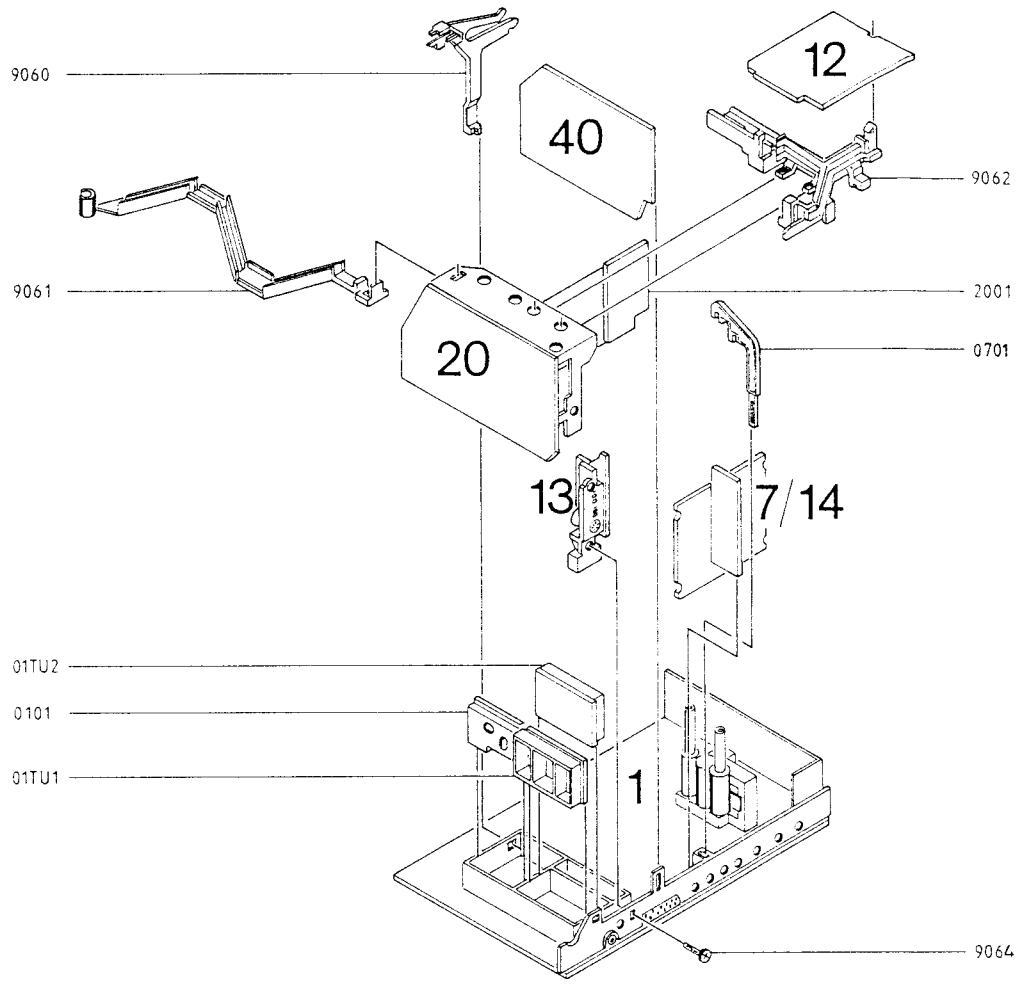
El-Chassis



01Modul	8053219	PCB 1, Basic Board f/ITT picture tube, see page 7-1			
	8053272	PCB 1, Basic Board f/VC picture tube, see page 7-1			
0101	8007021	Transposer	3152576	Holder EHT Cable	
01TU1	8050115	VHF Tuner	3152721	Holder focus cable	
01TU2	8050116	UHF Tuner			
07Modul	8003914	PCB 7, Teletext			
0701	3152584	Holder			
12Modul	8003830	PCB 12, Interface Audio/Data			
13Modul	8003831	PCB 13, A/V Connections			
14Modul	8003828	PCB 14, Display			
20Modul	8007089	PCB 20, Sound B/G/I/L/M			
2001	8007090	AM/FM Sound			
40Modul	8007091	PCB 40, Pal/Secam Decoder			
9060	3152662	Holder f/PCB 20			
9061	3152555	Holder f/mains cable			
	6275749	Mains cable w/holder			
9062	3152559	Holder f/PCB 12			
9064	2013123	Screw 3 x 10 mm			

Parts not shown	3503508	Owner's manual Danish	
	3503509	Owner's manual Swedish	
	3503510	Owner's manual Finnish	
	3503511	Owner's manual English	
	3503512	Owner's manual German	
	3503513	Owner's manual Dutch	
	3503514	Owner's manual French	
	3503515	Owner's manual Greek	
	3503516	Owner's manual Italian	
		Packing:	
	3397557	Foam insert	
	3917104	Foam foil	
	3397620	Foam packing	
	3391983	Outer carton	
ACCESSORIES			
Teletext, 8003914	8341123	µP HD 404918	
	3152584	Holder	
	3543099	Mounting instructions	
	3391792	Packing	
Indoor antenna, 8720031	3543063	Mounting instructions	
Sound Kit 6.5 MHz-K1, 8003917	IZ07	8341115	TDA 4445B
	IZ14	8341116	TBA 120T
	TZ04	8320486	BF 959
	TZ08	8320510	BC 558
	TZ11	8320509	BC 548B
	3543104	Mounting instructions	

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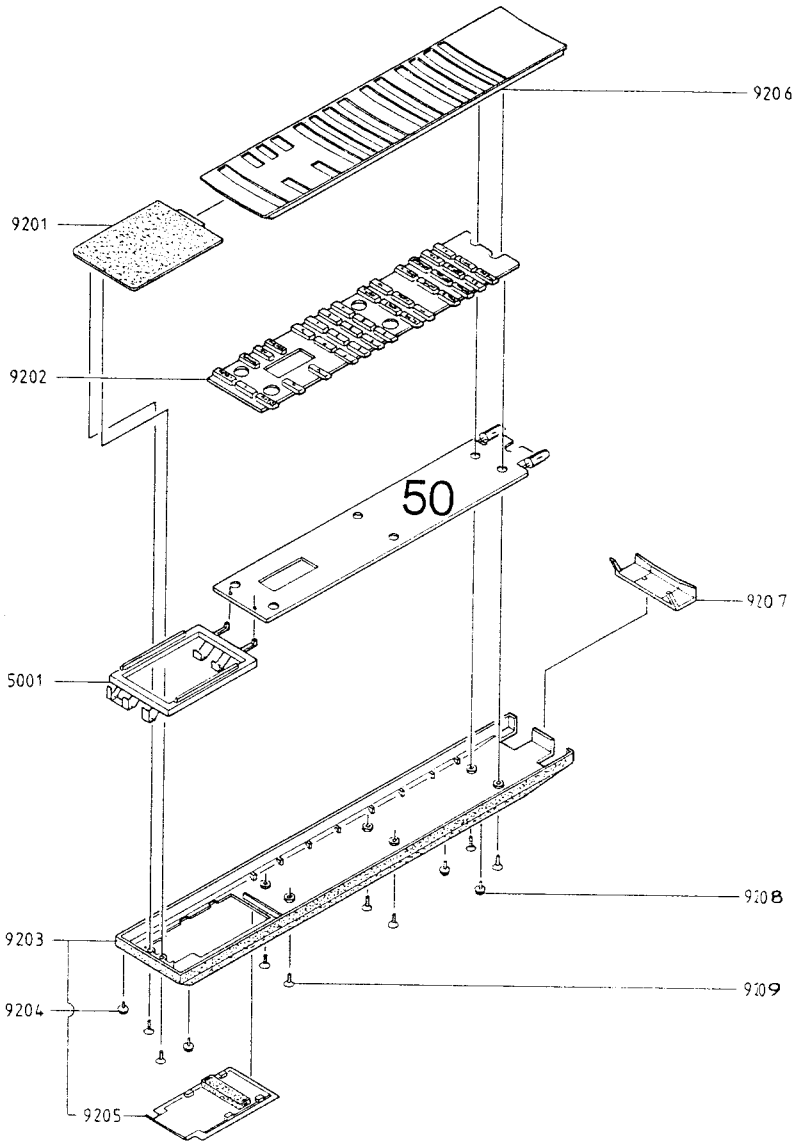
Beolink 1000 Terminal

8930130 Beolink 1000
8930150 Beolink 1000, Italian



50Modul	8003894	Remote Control
5001	3015152	Guide f/battery
	7500211	Contact spring

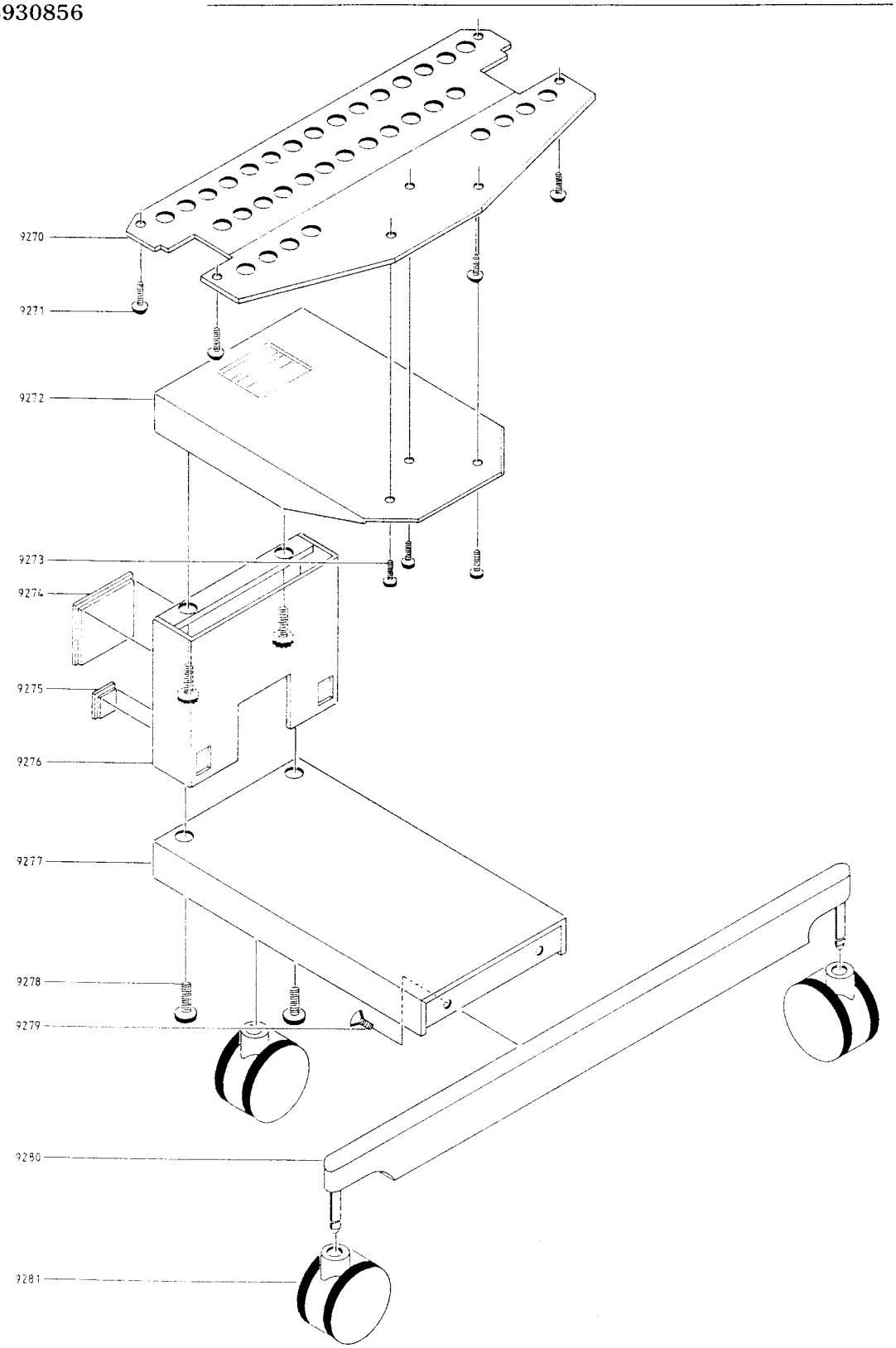
9201	3164688	Battery lid
9202	2776086	Set of buttons, type 3013
	2776087	Set of buttons, type 3015
9203	3131300	Bottom
9204	3103274	Plastic foot
9205	3164606	Battery cover
9206	3131297	Top, type 3013
	3131299	Top, type 3015
9207	3375047	Lens
9208	3103274	Plastic foot
9209	2034066	Screw 2 x 5mm

Parts not shown

8700017	Battery
3395073	Outer carton
3397650	Foam packing
3390210	Bag
3503495	Owner's manual Danish
3503496	Owner's manual Swedish
3503497	Owner's manual Finnish
3503498	Owner's manual English
3503499	Owner's manual German
3503500	Owner's manual Dutch
3503501	Owner's manual French
3503502	Owner's manual Greek
3503503	Owner's manual Italian

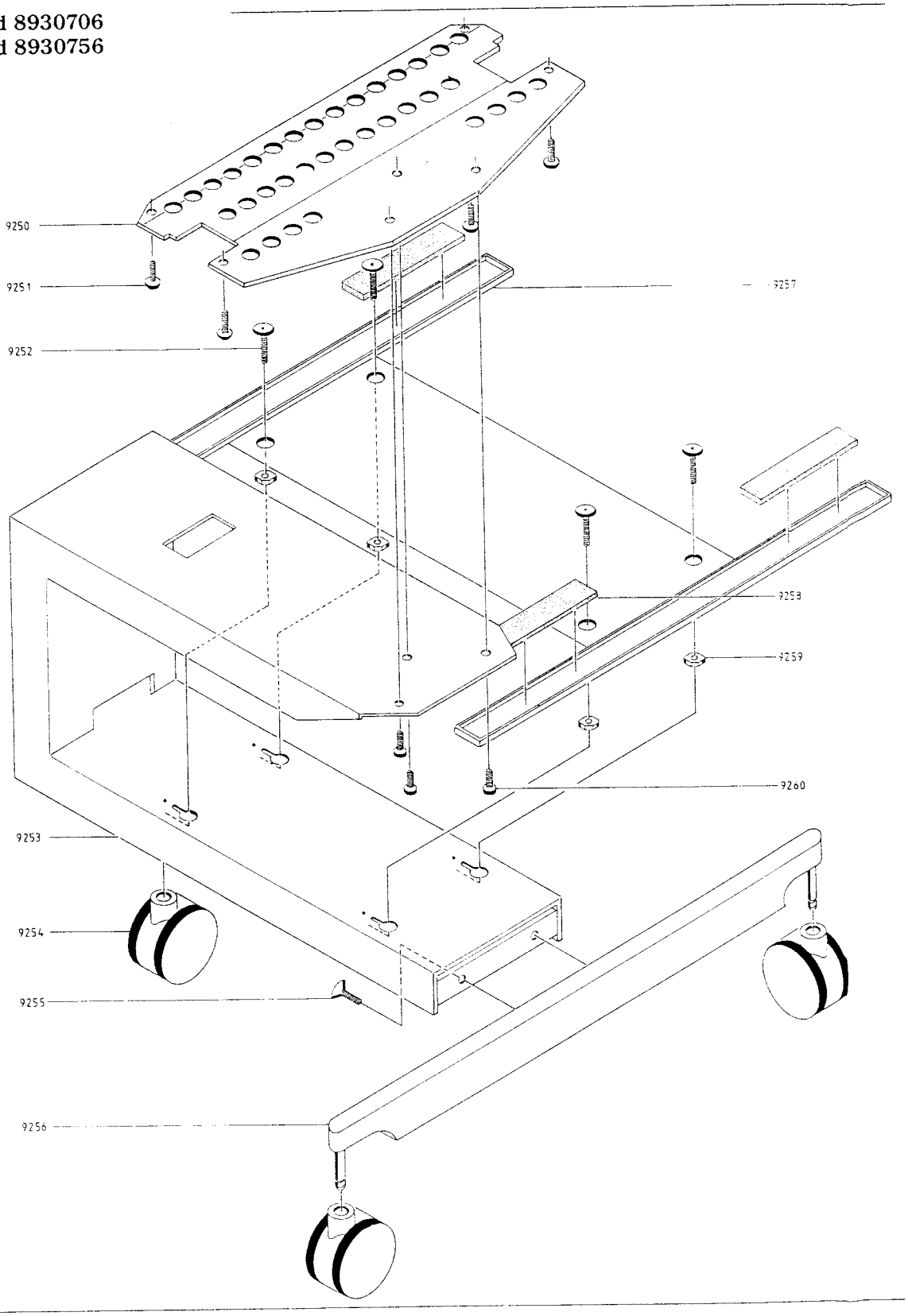
4-8

Stand 3000 8930856



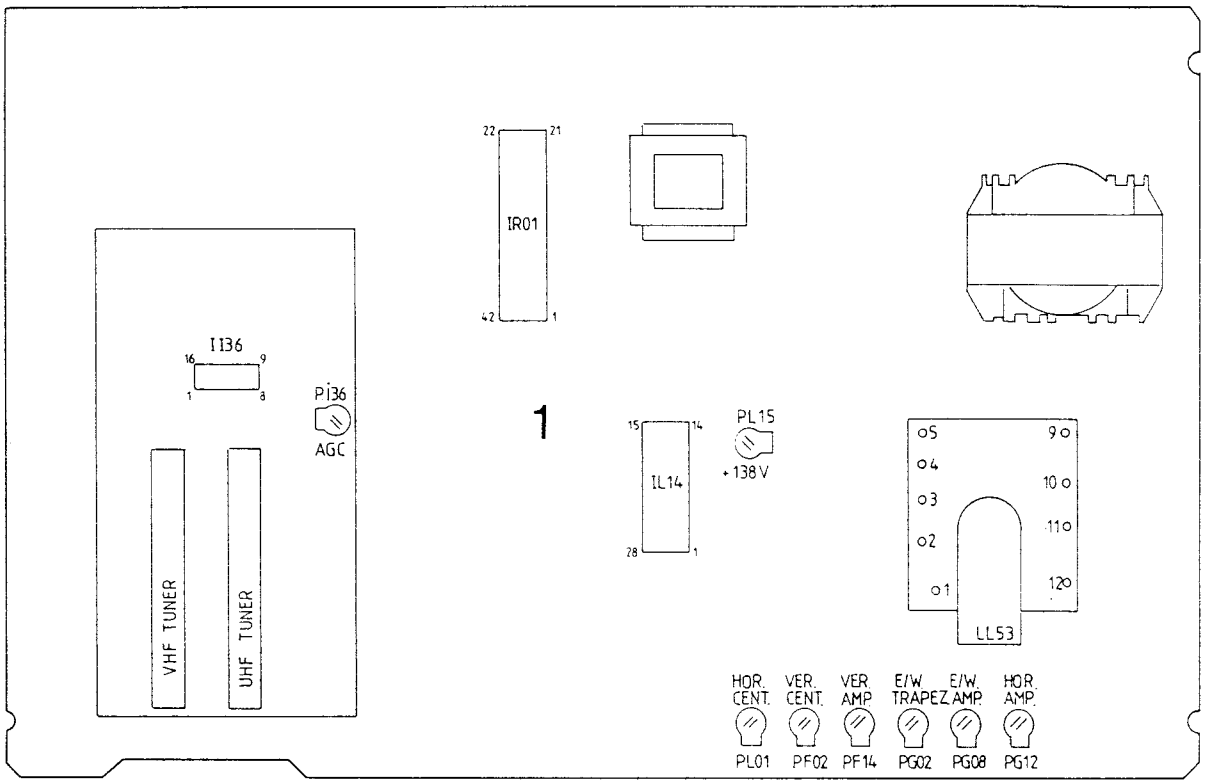
9270	3124122	Mounting plate	9278	2046009	Screw 6 x 16mm
9271	2044033	Screw 5 x 12mm	9279	2044032	Screw 5 x 10mm
9272	3100058	Frame top	9280	3450825	Profile
9273	2042063	Screw 4 x 6mm	9281	3032019	Wheel
9274	3341071	Cover			
9275	3341072	Cover		3390344	Bag w/parts
9276	3100059	Frame intermediate piece		3543093	Assembling guide
				3392063	Packing
9277	3100060	Frame bottom		3397676	Foam packing

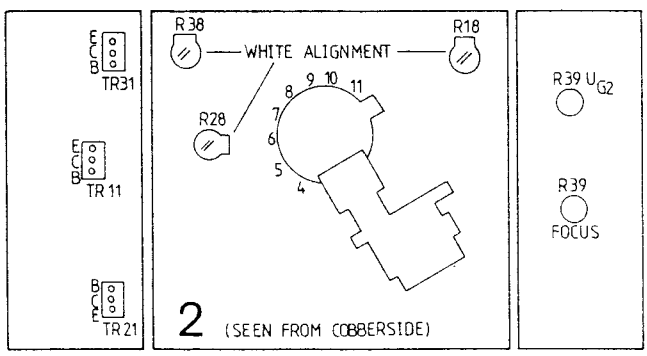
Video Stand 8930706
Video Stand 8930756

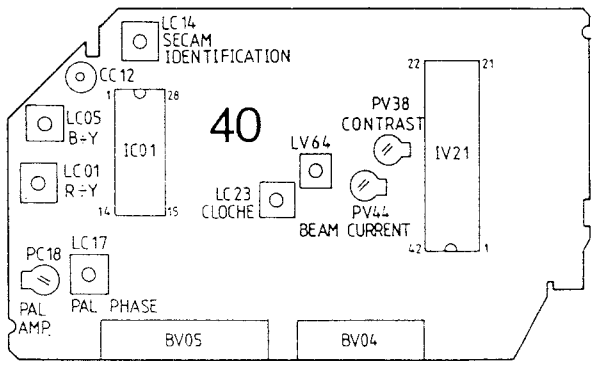


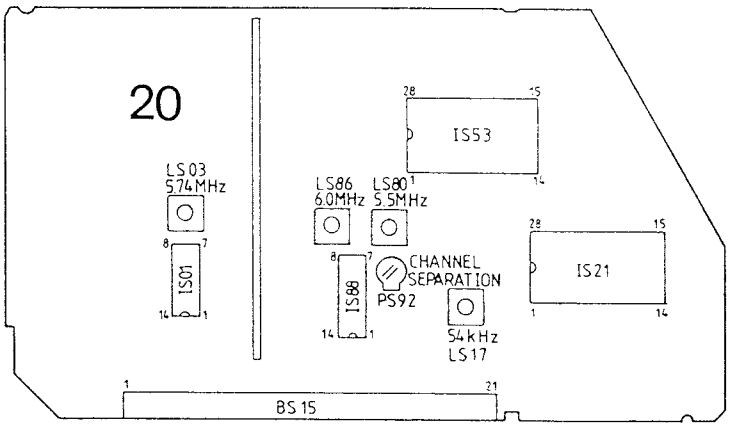
9250	3124098	Mounting plate	9258	3912047	Felt self adhesive
9251	2044033	Screw 5 x 12mm	9259	2380139	Nut M5
9252	2044034	Screw 5 x 30mm	9260	2042052	Screw 4 x 6mm
9253	3100025	Frame			
9254	3032002	Wheel		3390268	Bag w/parts
9255	2044032	Screw 5 x 10mm		3543058	Assembling guide f/type 3070
9256	3450544	Profile			
9257	3151243	Video holder f/type 3070		3543076	Assembling guide f/type 3075
	3151259	Video holder f/type 3075		3391925	Packing
				3397547	Foam packing

5-1


IR01
I136
PI36
AGC
VHF TUNER
UHF TUNER
1
IL14
PL15
+138V
LL53
HOR. CENT. PL01
VER. CENT. PF02
VER. AMP. PF14
E/W TRAPEZ PG02
E/W AMP. PG08
HOR. AMP. PG12


TR31
TR11
TR21
R38
WHITE ALIGNMENT
R18
R28
R39 U G2
R39 FOCUS
2
(SEEN FROM COBBERSIDE)


LC14 SECAM IDENTIFICATION
CC12
LC05 B-Y
LC01 R-Y
IC01
40
LV64
PV38 CONTRAST
IV21
LC23 CLOCHE
PV44 BEAM CURRENT
PC18 PAL AMP.
LC17 PAL. PHASE
BV05
BV04


20
LS03 5.74MHz
IS01
IS53
LS86 6.0MHz
LS80 5.5MHz
IS88
CHANNEL SEPARATION
PS92
54kHz LS17
IS21
BS15

Bang & Olufsen

JUSTERINGSVEJLEDNING

Justeringerne udføres med følgende grundstilling, med mindre andet er nævnt:

»BRILLIANCE« niveau 20, »COLOUR« niveau 40 og »CONTRAST« niveau 24.

Netdel, 1PL15:

Et DC-voltmeter tilsluttes ben 10 på linieudgangstransformatoren 1LL53.
Potentiometeret 1PL15 justeres til 138V.

Skærmgitter, 2R39 U_{G2}:

»CONTRAST« og »BRILLIANCE« reguleres til minimum.
Med et DC-voltmeter måles spændingerne på kollektorerne af videoudgangstransistorerne 2TR11, 2TR21 og 2TR31.
Med 2R39 U_{G2} potentiometeret justeres den højeste af de målte værdier til 155V.

Fokus, 2R39:

Fokuspotentiometeret 2R39 justeres, til der opnås maksimal skarphed på de lodrette linjer, der ligger ca. 10 cm. fra skærmkanten.

Spidshvid, 40PV38:

»BRILLIANCE« reguleres til niveau 09 og »CONTRAST« til niveau 31.
Modtageren tilføres et gittermønstersignal.
Et oscilloscop tilsluttes ben 6 på billedrørssoklen (10:1 probe).
Potentiometeret 40PV38 justeres til en amplitude på $90V_{SS}$ fra sort til hvidt.

Strålestrøm, 40PV44:

»BRILLIANCE« reguleres til niveau 31 og »CONTRAST« til niveau 10.
Modtageren tilføres et hvidt signal.
Et oscilloscop tilsluttes ben 6 på billedrørssoklen (10:1 probe).
Potentiometeret 40PV44 justeres til en amplitude på $50V_{SS}$ fra sort til hvidt.

Hvidniveau, 2R18, 2R28, 2R38:

»BRILLIANCE« reguleres til niveau 24 og »CONTRAST« til niveau 13.
Modtageren tilføres et gråskalasignal.
Potentiometeret 2R28 sættes i midterstilling, og med potentiometerne 2R18 og 2R38 justeres, til gråskalaens felter er farveløse.
Såfremt der ikke opnås farveløse felter, ændres 2R28's indstilling, og proceduren gentages.

ADJUSTMENTS

All adjustments are carried out with the following preset levels, unless otherwise indicated:

"BRILLIANCE" level 20, "COLOUR" level 40, "CONTRAST" level 24.

Power-supply, 1PL15:

Connect a DC voltmeter to pin 10 of the EHT-transformer 1LL53.
Adjust the potentiometer 1PL15 to 138V.

Screen grid, 2R39 U_{G2}:

Adjust "CONTRAST" and "BRILLIANCE" to minimum.
Using a DC voltmeter measure the voltages of the collectors of the video output transistors 2TR11, 2TR21 and 2TR31.
Using the potentiometer 2R39 U_{G2} set the highest of the measured levels to 155V.

Focus, 2R39:

Adjust the focus potentiometer 2R39 until maximum sharpness is achieved on the vertical lines approx. 10 cm from the edge of the screen.

Peak white, 40PV38:

Adjust "BRILLIANCE" to level 09 and "CONTRAST" to level 31.
Feed a grid pattern signal to the receiver.
Connect an oscilloscope to pin 6 of the picture tube socket (10:1 probe).
Adjust the potentiometer 40PV38 to an amplitude of $90V_{pp}$ from black to white.

Beam current, 40PV44:

Adjust "BRILLIANCE" to level 31 and "CONTRAST" to level 10.
Feed a white signal to the receiver.
Connect an oscilloscope to pin 6 of the picture tube socket (10:1 probe).
Adjust the potentiometer 40PV44 to an amplitude of $50V_{pp}$ from black to white.

White alignment, 2R18, 2R28, 2R38:

Adjust "BRILLIANCE" to level 24 and "CONTRAST" to level 13.
Feed a grey scale signal to the receiver.
Set the potentiometer 2R28 to its middle position, and using the potentiometers 2R18 and 2R38 adjust until the fields of the grey scale are colourless.
If colourless fields cannot be achieved, adjust the position of 2R28 and repeat the procedure.

Tunerjustering.

AGC take over, 1PI36:

Modtageren tilføres et antennesignal på 1,3mV og frekvensen 217MHz.
Et DC-voltmeter tilsluttes ben 5 på 1II36.
Potentiometeret 1PI36 drejes helt med uret.
Potentiometeret 1PI36 justeres, til spændingen er faldet 0,3V.

Afbøjningsjusteringer.

Horisontal centrering, 1PL01:

Potentiometeret 1PL01 justeres til optimal billedcentrering.

Horisontal amplitude, 1PG12:

Potentiometeret 1PG12 justeres til optimal billedbredde.

Vertikal centrering, 1PF02:

Potentiometeret 1PF02 justeres til optimal billedcentrering.

Vertikal amplitude, 1PF14:

Potentiometeret 1PF14 justeres til optimal billedhøjde.

E/W amplitude, 1PG08:

Potentiometeret 1PG08 justeres til lige lodrette linjer i højre og venstre side af billedet.

E/W trapez, 1PG02:

Potentiometeret 1PG02 justeres til lige lodrette linjer i højre og venstre side af billedet.

PAL justeringer.

Under disse justeringer er det en fordel at fjerne lydmodulet PCB20.

PAL-reference 8,86MHz, 40CC12:

Modtageren tilføres et PAL farvebar-signal.
På loddesiden af PCB40 forbindes ben 13 og ben 28 på 40IC01 med en 1 kohms modstand.
Ben 17 og ben 9 på 40IC01 kortsluttes.
Trimmekondensatoren 40CC12 justeres til minimal farverul.
Kortslutningen og modstanden fjernes.

PAL-fase, 40LC17, PAL-amplitude, 40PC18:

»COLOUR« justeres til niveau 60.
Modtageren tilføres et test-signal med farveløse R-Y/B-Y-felter.
Spolen 40LC17 (PAL-fase) og potentiometeret 40PC18 (PAL-amplitude) justeres til minimal farve i de farveløse R-Y/B-Y-felter af testbilledet.

Tuner adjustment.

AGC take-over, 1PI36:

Feed an aerial signal of 1.3mV and the frequency 217MHz to the receiver.
Connect a DC voltmeter to pin 5 of 1II36.
Turn the potentiometer 1PI36 clockwise as much as possible.
Adjust the potentiometer until the voltage has dropped by 0.3V.

Deflection adjustments.

Horizontal centering, 1PL01:

Using the potentiometer 1PL01, adjust until the picture is correctly centered.

Horizontal amplitude, 1PG12:

Using the potentiometer 1PG12, adjust until the correct picture width is achieved.

Vertical centering, 1PF02:

Using the potentiometer 1PF02, adjust until the picture is correctly centered.

Vertical amplitude, 1PF14:

Using the potentiometer 1PF14, adjust until the correct picture height is achieved.

E/W amplitude, 1PG08:

Using the potentiometer 1PG08, adjust until straight vertical lines are achieved in the righthand and lefthand sides of the picture.

E/W trapeze, 1PG02:

Using the potentiometer 1PG02, adjust until straight vertical lines are achieved in the righthand and lefthand sides of the picture.

PAL adjustments

It is advisable to remove the sound module PCB20 before carrying out these adjustments.

PAL reference 8.86MHz, 40CC12:

Feed a PAL colourbar signal to the receiver.
On the copperfoil side of PCB40 connect pins 13 and 28 of 40IC01 with a resistor of 1 kohm.
Short-circuit pins 17 and 9 of 40IC01.
Adjust the trimming capacitor to minimum colour scroll.
Remove the short-circuit and the resistor.

PAL phase, 40LC17, PAL amplitude, 40PC18:

Adjust "COLOUR" to level 60.
Feed a test signal with colourless R-Y/B-Y fields to the receiver.
Adjust the coil 40LC17 (PAL phase) and the potentiometer 40PC18 (PAL amplitude) to minimum colour in the colourless R-Y/B-Y fields of the test picture.

SECAM justeringer

Under disse justeringer er det en fordel at fjerne lydmodulet PCB20.

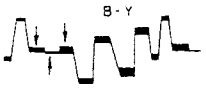
Modtageren tilføres et SECAM farvebar-signal.

Identifikation, 40LC14:

Et DC-voltmeter tilsluttes ben 21 på 40IC01.
Spolen 40LC14 justeres til maksimal spænding.

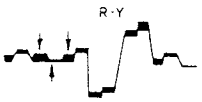
B-Y demodulator, 40LC05:

Et oscilloscop tilsluttes ben 3 på 40IC01.
Spolen 40LC05 justeres, til de farveløse bjælker i farvebaren har samme niveau som linjeblankingen.



R-Y demodulator, 40LC01:

Et oscilloscop tilsluttes ben 1 på 40IC01.
Spolen 40LC01 justeres, til de farveløse bjælker i farvebaren har samme niveau som linjeblankingen.



Cloche filter, 40LC23:

Et oscilloscop tilsluttes ben 15 på 40IC01.
Spolen 40LC23 justeres, til farvebjælkernes amplitude har samme niveau.

Lydjusteringer

5,5MHz, 20LS80, 5,74MHz, 20LS03:

Modtageren tilføres et stereo-signal indeholdende både 5,5MHz og 5,74MHz med modulation.
Et AC-voltmeter tilsluttes ben 8 på 20IC01.
Spolen 20LS03 justeres til maksimal amplitude.
AC-voltmeteret tilsluttes ben 8 på 20IS88.
Spolen 20LS80 justeres til maksimal amplitude.

54kHz, 20LS17:

Modtageren tilføres et stereo-signal indeholdende både 5,5MHz og 5,74MHz med modulation.
Et oscilloscop tilsluttes ben 26 på 20IS21.
Spolen 20LS17 justeres til maksimal amplitude.

Kanalseparation, 20PS92:

Modtageren tilsluttes et stereo-signal uden modulation i venstre kanal.
Et oscilloscop tilsluttes ben 5 på 20BS15.
Potentiometeret 20PS92 justeres til minimal amplitude.

6,0MHz, 20LS86:

Modtageren tilføres et 6,0MHz lydsignal med modulation.
Et AC-voltmeter tilsluttes ben 8 på 20IS88.
Spolen 20LS86 justeres til maksimal amplitude.

SECAM adjustments:

It is advisable to remove the sound module PCB20 before carrying out these adjustments.

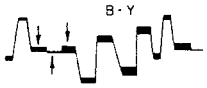
Feed a SECAM colourbar signal to the receiver.

Identification, 40LC14:

Connect a DC voltmeter to pin 21 of 40IC01.
Adjust coil 40LC14 to maximum voltage.

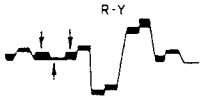
B-Y demodulator, 40LC05:

Connect an oscilloscope to pin 3 of 40IC01.
Adjust coil 40LC05 until the colourless bars of the colourbar are on the same level as the line blanking.



R-Y demodulator, 40LC01:

Connect an oscilloscope to pin 1 of 40IC01.
Adjust coil 40LC01 until the colourless bars of the colourbar are on the same level as the line blanking.



Cloche filter, 40LC23:

Connect an oscilloscope to pin 15 of 40IC01.
Adjust coil 40LC23 until the amplitudes of the colour bars are on the same level.

Sound adjustments.

5.5MHz, 20LS80, 5.74MHz, 20LS03:

Feed a modulated stereo signal containing both 5.5MHz and 5.74MHz to the receiver.
Connect an AC voltmeter to pin 8 of 20IC01.
Adjust coil 20LS03 to maximum amplitude.
Connect the AC voltmeter to pin 8 of 20IS88.
Adjust coil 20LS80 to maximum amplitude.

54kHz, 20LS17:

Feed a modulated stereo signal containing both 5.5MHz and 5.74MHz to the receiver.
Connect an oscilloscope to pin 26 of 20IS21.
Adjust coil 20LS17 to maximum amplitude.

Channel separation, 20PS92:

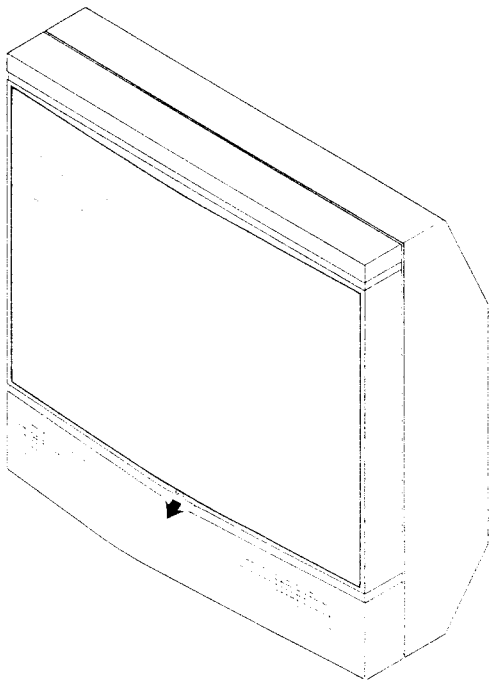
Feed a stereo signal without modulation in the left channel to the receiver.
Connect an oscilloscope to pin 5 of 20BS15.
Adjust the potentiometer 20PS92 to minimum amplitude.

6.0MHz, 20LS86:

Feed a 6.0MHz modulated sound signal to the receiver.
Connect an AC voltmeter to pin 8 of 20IS88.
Adjust coil 20LS86 to maximum amplitude.

ADSKILLELSE

Demontering af kontrastskærmen



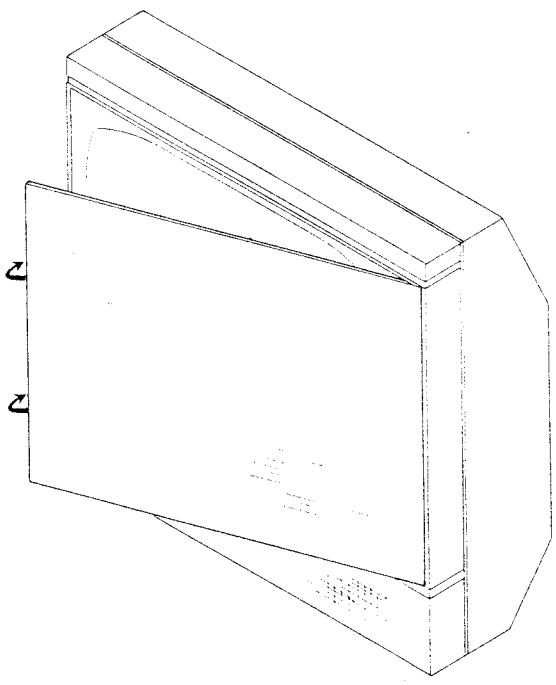
Træk ud i kontrastskærmens nederste kant.

DISASSEMBLY

Removal of contrast screen

Pull the lower edge of the contrast screen outwards.

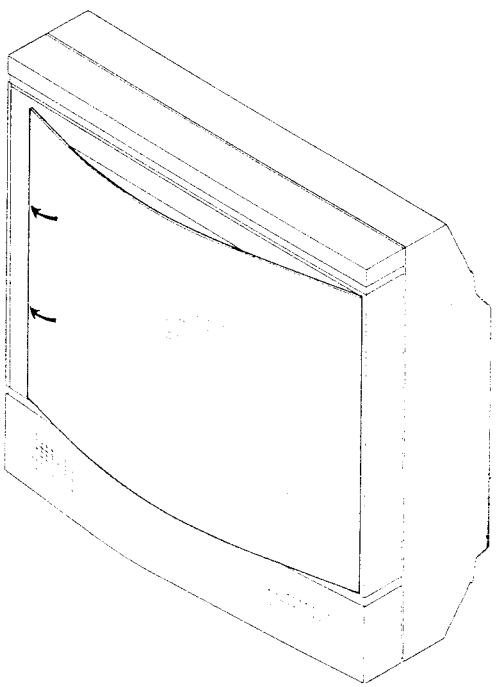
Montering af kontrastskærmen



Monter skærmen i rillen af det ene sidepanel.

Bøj skærmen frem og monter skærmen i rillen af det modsatte sidepanel.

Mounting of contrast screen

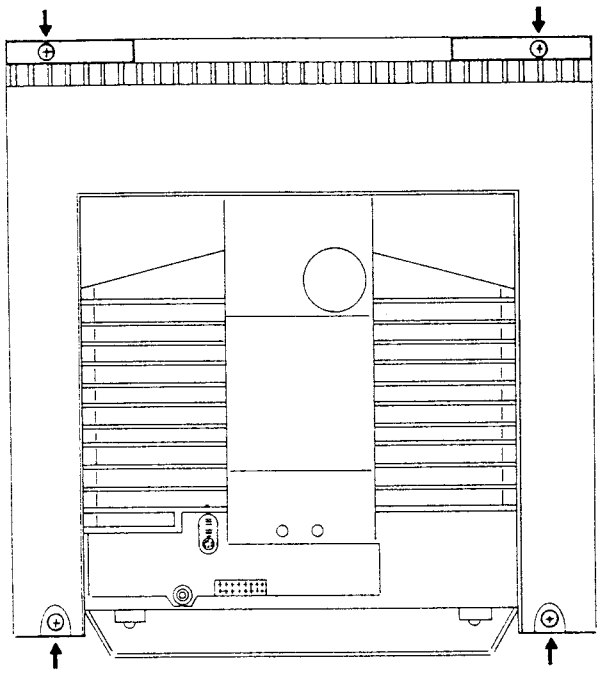


Fit the screen into the groove in one of the side panels.

Flex the screen slightly outwards and fit the screen into the groove in the opposite side panel.

Bagpart

Rear part

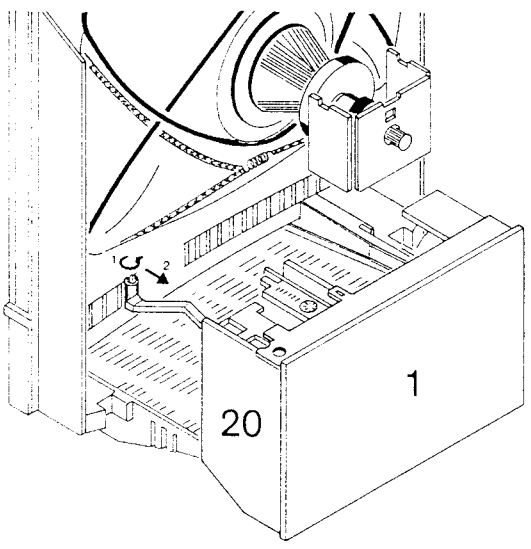


De fire skruer løsnes, og bagparten trækkes lige bagud.

Loosen the 4 screws and then remove the rear part by pulling straight outwards.

Serviceposition

Service position



Chassiset sættes i servicepositionen, ved at det trækkes udad og løftes op.

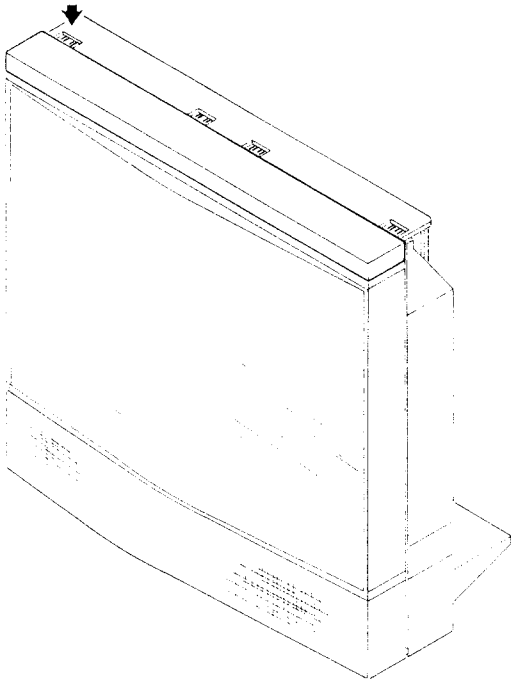
Ledningsbakken kan løsnes fra kabinettet, ved at dets bageste ende drejes mod uret og dernæst trækkes fremad.

Place the chassis in the service position by pulling it outwards and lifting it.

The cable tray can be detached from the cabinet by turning its rear end anticlockwise and then pulling it forwards.

Toppanel

Top panel



Panelet løsnes i den ene side, ved at låsen aktiveres med en skruetrækker.

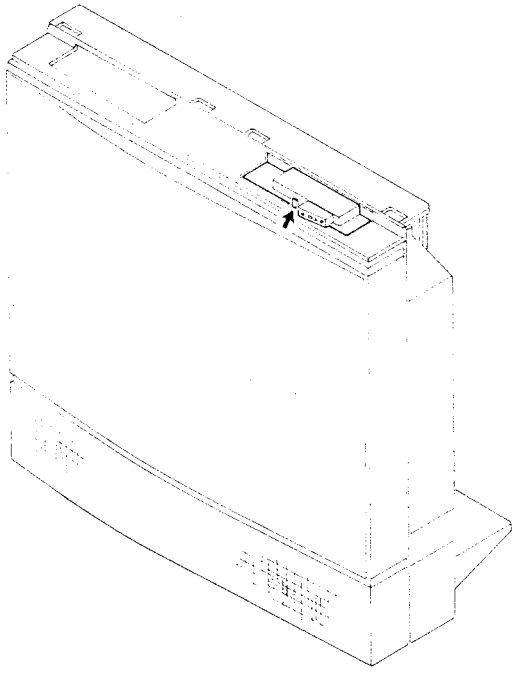
Toppanelet kan nu fjernes.

Loosen the panel in one side by releasing the lock with a screwdriver.

The top panel can now be removed.

PCB 05 IR-modtager

PCB 05 IR-receiver



Låsen løsnes med en skruetrækker, og PCB'en tages ud, ved at den løftes i den forreste kant.

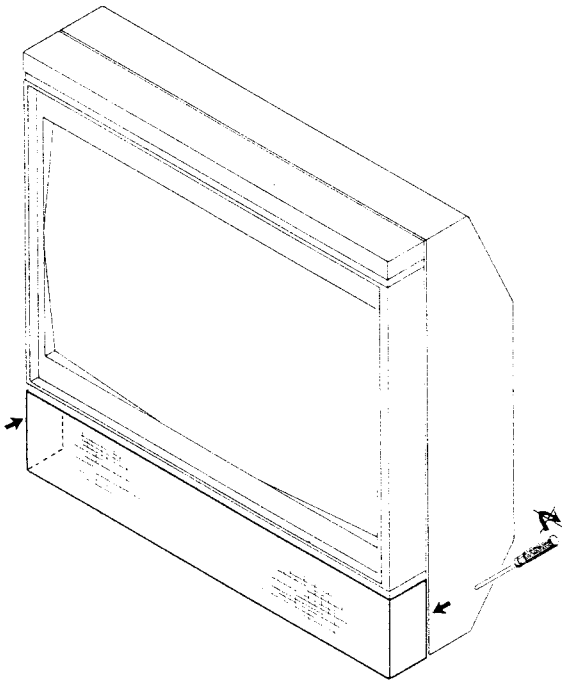
NB! Ved demontering af IR-modtagerens hus skal IR-modtagerdioden loddes ud.

Release the lock with a screwdriver and remove the PCB by lifting it at its front.

Note! If the housing of the IR-receiver is to be removed, the IR-receiver diode must be desoldered.

Højttalerpanel

Loudspeaker panel



En skruetrækker sættes forsigtigt ind mellem højttalerpanelet og kabinettet i apparatets højre side.

Højttalerpanelet løsnes med et let tryk med skruetrækkeren og skubbes dernæst mod venstre.

Med et let tryk mod højttalerpanelets venstre hjørne frigøres panelet fuldstændig.

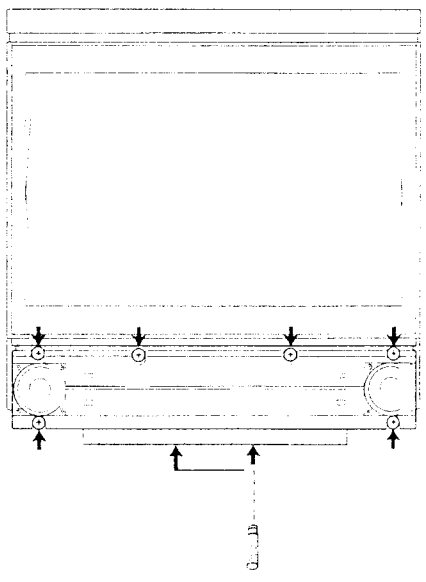
Carefully insert a screwdriver between the loudspeaker panel and the cabinet in the right-hand side of the set.

Loosen the loudspeaker panel by exerting a light pressure with the screwdriver.
Push the loudspeaker panel towards the left.

A light push against the left corner of the loudspeaker panel will now release the panel completely.

Højtalerbaffel

Loudspeaker baffle



De seks skruer fjernes.

Højttalerbafflen løsnes, ved at de to låse i bunden af apparatet aktiveres, hvorefter bafflen trækkes fremad og opad.

Remove the 6 screws.

Loosen the loudspeaker baffle by using a screwdriver to release the 2 locks at the base of the set.
Then pull the baffle outwards and upwards.

REPARATIONS-TIPS

REPAIR TIPS

Chassis Modifications

Tabel 1

Type \ Picture tube	Videocolor	ITT
3140	8053219*1*2	8053219*1
3141	8053219*2	8053219
3143	8053272	8053272*2
3144	8053272	8053272*2
3145	8053272*1	8053272*1*2
3146	8053272	8053272*2
3147	8053272	8053272*2

*1 Change IR01 8341123 → 8341124

*2 Change chassis as shown in Tabel 2

Tabel 2

Pos. No. \ Picture tube	Videocolor	ITT
RG 05	270 kΩ	100 kΩ
RG11	10 kΩ	4.7 kΩ
RG 12	3.9 kΩ	1.2 kΩ
RF17	3.3 Ω - 5011622	3 Ω - 5011614
RL 54	10 kΩ	100 kΩ
CL 48	12 nF - 4130429	11 nF - 4130435
CL 53	10 kΩ	100 kΩ

Stand-by

Apparatet er i stand-by og kan ikke startes op.
Stand-by indikatoren lyser.
Kontroller, om der er kommunikation på I^2C bussen.
Dette måles på ben 31 og 32 af 01IR01.

Apparatet tændes og forsøger at starte op tre gange, hvorefter det går i stand-by.
Det skyldes, at sikkerhedskredsløbet på ben 28 af 01IL14 aktiveres.
Kontroller kredsløbet omkring følertransistoren 01TL17.

Stand-by

The TV set is in stand-by and cannot start up.
The stand-by indicator lights.
Check whether there is communication on the I^2C bus.
This is measured on pins 31 and 32 of 01IR01.

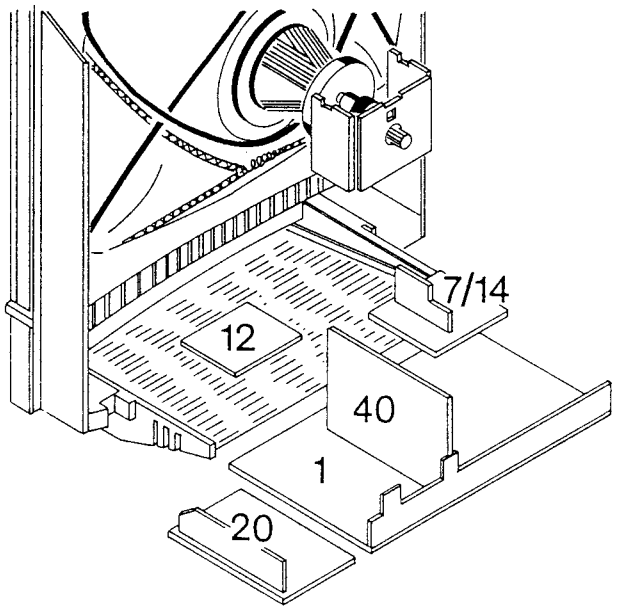
The TV set is switched on, tries to start up three times and then returns to stand-by. This is due to the activation of the protection circuit on pin 28 of 01IL14.
Check the sensor circuit including the transistor 01TL17.

Servicering af PAL/SECAM dekoderen PCB40

Når PAL/SECAM dekoderen PCB40 serviceres, kan lydmodulet PCB20 fjernes.

Servicing PAL/SECAM decoder PCB40

When servicing the PAL/SECAM decoder PCB40, the sound module PCB20 can be removed.



Desuden kan tekstmodulet PCB07 eller OSD-modulet PCB14 fjernes.
Apparatet viser nu billede, men der er ingen lyd, teletekst eller display på skærmen.
Pil i øverste højre hjørne lyser.

The text module PCB07 or the OSD-module can also be removed. A picture can now be displayed on the screen, but there is no sound, teletext or display on the screen.
An arrow in the upper righthand corner lights.

Båndkabel mellem PCB40 og PCB02

Det sekspolede båndkabel mellem PCB40 og PCB02 må ikke monteres før 30 sekunder efter, apparatet er slukket.
Det skyldes, at RGB-udgangen har stelforbindelse gennem det sekspolede båndkabel.

Ribbon cable between PCB40 and PCB02

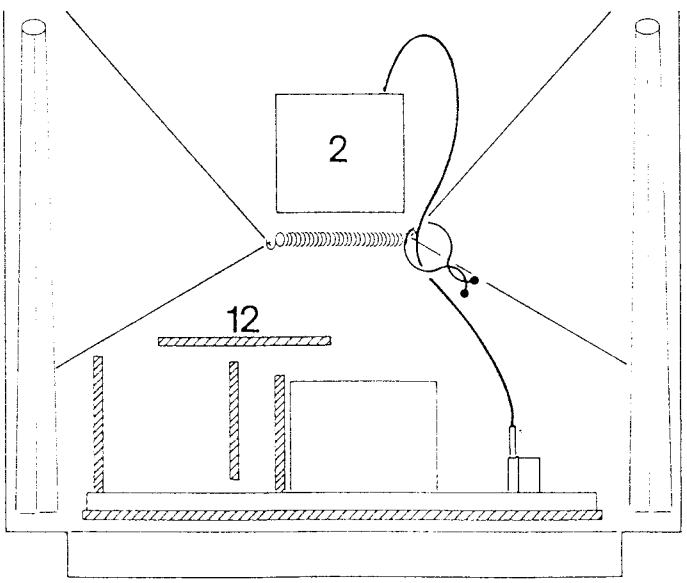
The 6-pin ribbon cable between PCB40 and PCB02 must not be mounted until 30 seconds after the set has been switched off. This precaution is necessary because the RGB output is connected to ground via the 6-pin cable.

Fokusledning

Indstråling fra fokusledningen kan hindre datakommunikationen på PCB12. Derfor må fokusledningen ikke komme i nærheden af PCB12, og ved samling af apparatet bør fokusledningen monteres som vist på tegningen.

Focus wire

Interference from the focus wire can impede the data communication on PCB12. Consequently, the focus wire must be kept away from PCB12, and when assembling the set the focus wire should be mounted as shown on the drawing.



SLUTAFPRØVNING

Denne afprøvning kan benyttes som kontrol, efter at reparationen er afsluttet.

Tilslutninger

TV'et tilsluttes lysnettet og et antennesignal.

Nærbetjening

Hovedafbryderen aktiveres → Stand-by indikator lyser

[P ⌒] aktiveres → Starter på P1, hvis TV'et har været frakoblet netspændingen, og ellers på sidst benyttede program

Beolink 1000 fjernbetjening

Tænd

[TV] → Starter på sidst benyttede program

0-31 → Starter på valgte programnummer

Tune

Direkte frekvensvalg
Indstilling af ønsket frekvens, f.eks. 543MHz (kanal 30), på et programnummer ml. 0 og 31.
Omregningstabel for frekvens/kanal findes i betjeningsvejledningen (Frekvensoversigt).

[GO TO] → Grønt display
[5] [4] [3] → Gult display

Store

Den indstillede frekvens kan lægges i hukommelsen på et programnummer mellem 1 og 31.

[STORE] → Rødt display
[1] → Programnummer 1 vælges
[STORE] → Grønt display
[●] → Stand-by
[1] → Den på programnummer 1 lagrede frekvens vises

Tune

Søgning

Søgning under det valgte programnummer (0-31)

[<<] eller [>>] → Søgning stopper på nærmeste senderfrekvens

Finindstilling

Ønskede frekvens er fundet.
Billedet står ikke skarpt.

[GO TO] → Grønt display
[<<] eller [>>] → FT (fine tune) kan varieres op (+) eller ned (-)

FINAL TEST

This test may be used as a check-up after the repair has been carried out.

Connections

Connect the TV set to the mains supply and an aerial signal.

Direct Operation

Activate the mains switch → The stand-by indicator lights

Activate [P ⌒] → Starts on P1 if the TV set has been disconnected from the mains supply or else on the programme last seen

Beolink 1000 Remote Control

Switching On

[TV] → Starts on the programme last seen

0-31 → Starts on the preset No selected

Tuning

Direct frequency selection
Setting of a desired frequency, e.g. 543MHz (channel 30), on a preset No between 0 and 31.
Conversion tabel for frequency/channel, see owner's manual (List of frequencies).

[GO TO] → Green display
[5] [4] [3] → Yellow display

Store

The set frequency can be stored on a preset No between 0 and 31.

[STORE] → Red display
[1] → Selection of preset No 1
[SOUND] → Green display
[●] → Stand-by
[1] → The frequency stored on the selected preset No is shown

Tuning

Search

Search on the selected preset No (0-31)

[<<] or [>>] → The search stops at the closest transmitter frequency

Fine Tuning

The frequency desired has been found.
The picture is not sharp.

[GO TO] → Green display
[<<] or [>>] → FT (fine tuning) may be varied up (+) or down (-)

Teletekst

Kun ved apparater med indbygget teletekst.

TEXT → Skifter til tekst-mode

Vælg en side, f.eks. 100

GO TO 1 0 0 → Tekstside 100 vises

STORE 2 STORE → Tekstside 100 lagres på hukommelsesside 2

● → Stand-by

TEXT 2 → Hukommelsesside 2, tekstside 100 vises

Billede

PICTURE → »BRILLIANCE xx«, grønt display

△ eller ▽ → Lys varieres mellem 0 og 31

PICTURE → »COLOUR xx«, grønt display

△ eller ▽ → Farvemætningen varieres mellem 0 og 60

PICTURE → »CONTRAST xx«, grønt display

△ eller ▽ → Kontrast varieres mellem 0 og 31

Lyd

SOUND → »VOLUME xx«, grønt display

△ eller ▽ → volume varieres mellem 0 og 40

SOUND → »BALANCE x«, grønt display

△ eller ▽ → Balance varieres mellem 8 og -8

SOUND → »TREBLE x«, grønt display

△ eller ▽ → Diskantniveauet varieres mellem 5 og -4

SOUND → »BASS x«, grønt display

△ eller ▽ → Basniveauet varieres mellem 5 og -4

SOUND → »VOLUME HP xx«, grønt display

△ eller ▽ → Volume i hovedtelefon varieres mellem 0 og 32

To sprog

Ved modtagelse af to-sprogede udsendelser kan der vælges mellem sprog A og B.

TURN → Skifter mellem sprog A og sprog B. Indikeres af to røde pile i øverste højre hjørne (◄ = A, ► = B).

Teletext

Only applies to TV sets with built-in teletext.

TEXT → Switches into the text mode

Select a page, e.g. 100

GO TO 1 0 0 → Shows text page 100

STORE 2 STORE → Text page 100 is stored on memory page 2

● → Stand-by

TEXT 2 → Shows memory page 2, text page 100

Picture

PICTURE → "BRILLIANCE xx", green display

△ or ▽ → Brilliance varies in the range from 0 to 31

PICTURE → "COLOUR xx", green display

△ or ▽ → Colour saturation varies in the range from 0 to 60

PICTURE → "CONTRAST xx", green display

△ or ▽ → Contrast varies in the range from 0 to 31

Sound

SOUND → "VOLUME xx", green display

△ or ▽ → Volume level varies in the range from 0 to 40

SOUND → "BALANCE x", green display

△ or ▽ → Balance level varies in the range from 8 to -8

SOUND → "TREBLE x", green display

△ or ▽ → Treble level varies in the range from 5 to -4

SOUND → "BASS x", green display

△ or ▽ → Bass level varies in the range from 5 to -4

SOUND → "VOLUME HP xx", green display

△ or ▽ → Volume level in head phones varies in the range from 0 to 32

Dual Languages

When receiving dual language programmes, language A or B may be selected.

TURN → Switches between language A and language B. This is indicated by two red arrows in the upper righthand corner (◄ = A, ► = B)

Stereo lyd

Ved modtagelse af stereo-lyd skifter TV'et automatisk til stereo. Stereo indikeres af to røde pile i øverste højre hjørne.

TURN → Mono-lyd, røde pile slukket
TURN → Stereo-lyd, to røde pile i øverste højre hjørne

Ved skift til anden stereo-udsendelse vil TV'et automatisk skifte til stereo.

Shift funktioner

Tidskonstant

SHIFT 2 → Tidskonstanten ændres til en perfekt synkronisering mellem TV'et og en videobåndoptager (»toggle«-funktion). Indikeres med »A/V« efter programnummeret på skærmen

System B/System L/System M

SHIFT 3 → Systemskift (»toggle«-funktion)

Billede

Der foretages kontrol af geometri, højspænding, fokus, følsomhed, hvid balance, farvespring, opløsning, slæb, skygger, interferens og gråskala.

Stereo Sound

When receiving stereo sound, the TV set automatically switches to stereo. Stereo is indicated by two red arrows in the upper righthand corner.

TURN → Mono sound, no red arrows in the upper righthand corner
TURN → Stereo sound, two red arrows in the upper righthand corner

When switching to another stereo transmission, the TV-set automatically switches to stereo sound.

Shift Functions

Time constant

SHIFT 2 → The time constant is changed into a perfect synchronization between the TV set and a video recorder (toggle function). This is indicated by "A/V" after the preset No

System B/System L/System M

SHIFT 3 → Change of system (toggle function)

Picture

Check geometry, high voltage, focus, sensitivity, white balance, colour switching, resolution, ringing, ghosts, interference and grey scale.

ISOLATIONSTEST

Ethvert apparat skal isolationstestes, efter at det har været adskilt. Testen udføres, når apparatet er samlet igen og er klar til udlevering til kunden.

Der må ikke forekomme overslag under testen!

Isolationstesten udføres på følgende måde:

De to stikben på netstikket kortsluttes og tilsluttes den ene af terminalerne på isolationstesteren. Den anden terminal tilsluttes stelbenet i en af højttaler-stikdåserne.

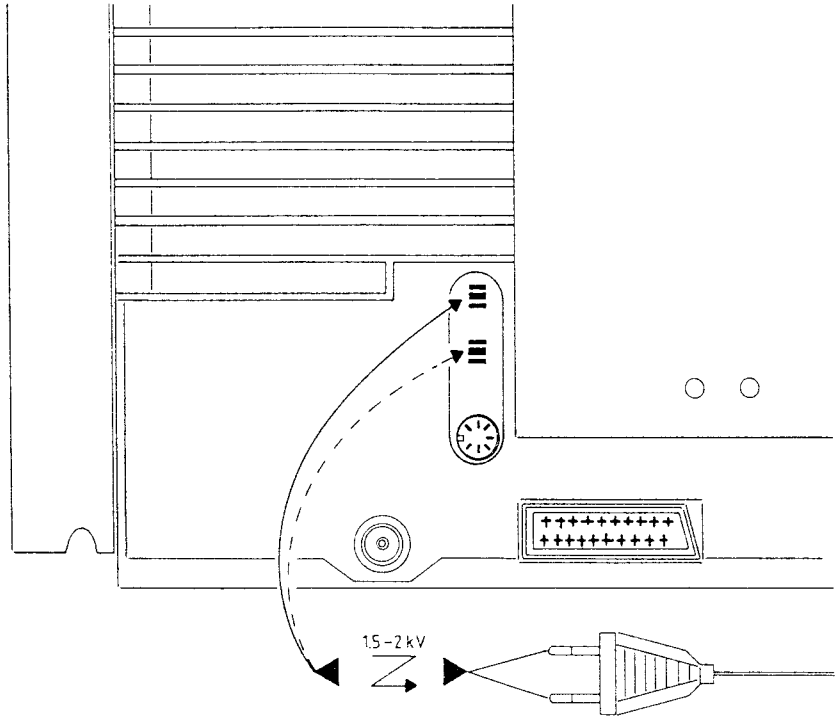
INSULATION TEST

Each set must be insulation tested after having been dismantled. Make the test when the set has been reassembled and is ready to be returned to the customer.

Flashovers must not occur during the testing procedure!

Make the insulation test as follows:

Short-circuit the two pins of the mains plug and connect them to one of the terminals of the insulation tester. Connect the other terminal to the chassis pin of one of the loudspeaker sockets.



OBS!

For at undgå beskadigelser af apparatet er det vigtigt, at begge terminaler på isolationstesteren har virkelig god kontakt.

Spændingsreguleringen på isolationstesteren drejes langsomt op, indtil en spænding på 1,5-2 kV er opnået. Her skal den holdes i ét sekund, hvorefter der langsomt drejes ned for spændingen igen.

NOTE!

To avoid damaging the set it is essential that both terminals of the insulation tester have good contact.

Slowly turn the voltage control of the insulation tester until a voltage of 1.5-2 kV is obtained. Maintain that voltage for one second, then slowly turn it down again.

Bang & Olufsen

9-1

TECHNICAL SPECIFICATIONS	BEOVISION MX4500
Picture tube size	70 cm – 28"
Visual picture size	66 cm – 26"
Picture tube	Full square, black matrix, In line 110 degrees
Cabinet	Red, white, black, blue and grey
Operation	Beolink 1000, Audio Aux Link
Screen display	Programme No., Frequency, Picture and Sound adjustments
Sound system	Stereo decoder A2 built-in, Bilingual sound A2 built-in
	Stereo enhancement, mono pseudo stereo
Nicam stereo	Prepared for Nicam stereo module
Teletext	5 languages: S-D-GB-I-F
Teletext memory	4 complete pages, + 4 page numbers for
	each TV programme, total 128 numbers
Number of TV programmes	32
Digital tuning system	VHF + S + Hyper + UHF channels
Tuner range	45 – 855 MHz
Transposer French L system	Built-in
Satellite programmes	Prepared for Beosat RX, AV Link 21-pin
	Beolink 1000 operation
Speaker system, stereo	2 Log Line
Speaker units	2 x 7.5 cm – 3"
Sound power output RMS	2 x 15 watts/8 ohms
Sound power output music	2 x 18 watts/8 ohms
Harmonic distortion	<0.5%
Intermodulation	<1%
Frequency range ±1.5 dB	20-20,000 Hz
Power bandwidth	20-12,500 Hz
Signal-to-noise ratio	>50 dB
Bass control	+16 -6 dB/60 Hz
Treble control	±10 dB/10,000 Hz
Power supply	180-260 volts/50-60 Hz
Power consumption	85 (63-150) watts
Stand by	5 watts
Dimensions W x H x D/Weight	65 x 67.5 x 46.5 cm/40.3 kg
Connections:	
AV Link	21-pin
Audio Aux Link	7-pin
Stereo headphones	Jack, separate volume control
External speakers	8 ohms
Accessories:	
Stand	ST 5000: 3076
Stand MX 4500 + VX 3000	ST 5000: 3076 + VX Shelf: 3077
Beosat RX receiver, AV Link	3026
Nicam stereo kit, EU	3037
Nicam stereo kit, GB	3040
AVX 1 Expander box 3099	3 sockets AV Link 21-pin, 2 sockets Audio Aux Link 7-pin
Loop amplifier	3098

Type Survey

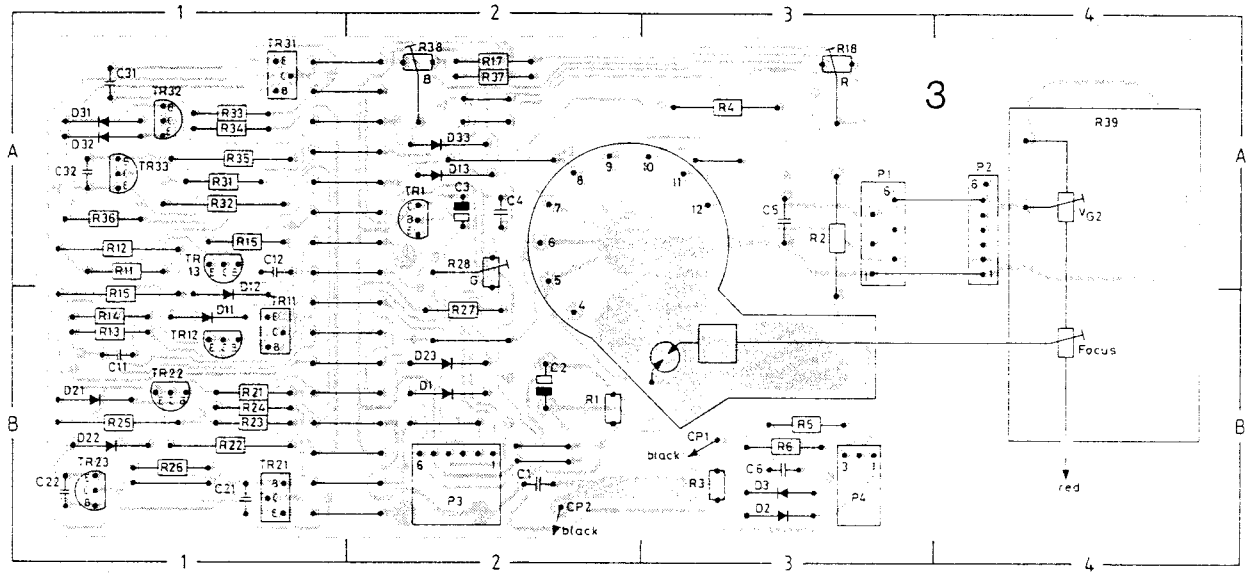
Type		Colour	System	Teletext	Transposer
3201	EU-MULTI	PAL/SECAM	B-G-I-L	X	X
3203	AUS	PAL/SECAM	B-G	X	
3204	I	PAL/SECAM	B-G	X	
3206	EU-FTZ	PAL/SECAM	B-G	X	
3207	E	PAL/SECAM	B-G	X*	

*6 character S-D-GB-I-F-E

Subject to change without notice

PRINTDRAWINGS AND OSCILLOGRAMS

PCB3, Video Output



PCB1, Basic Board *See page 2-5*

PCB7, Teletext *See page 2-4*

PCB20, Sound *See page 2-4*

AM/FM Sound *See page 2-4*

PCB40, Pal/Secam Decoder *See page 2-7*

DIAGRAM A TUNER AND IF SYSTEM

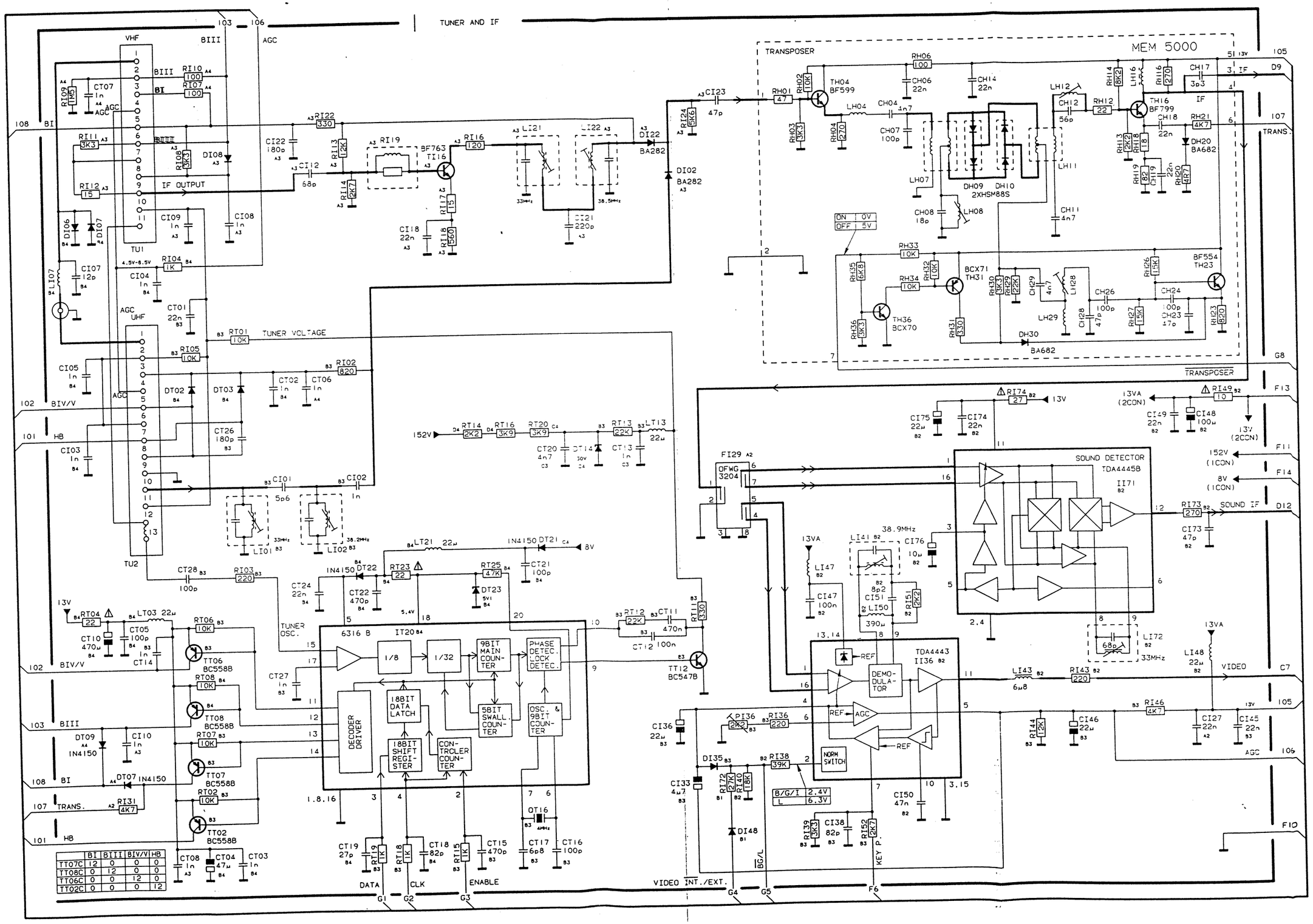
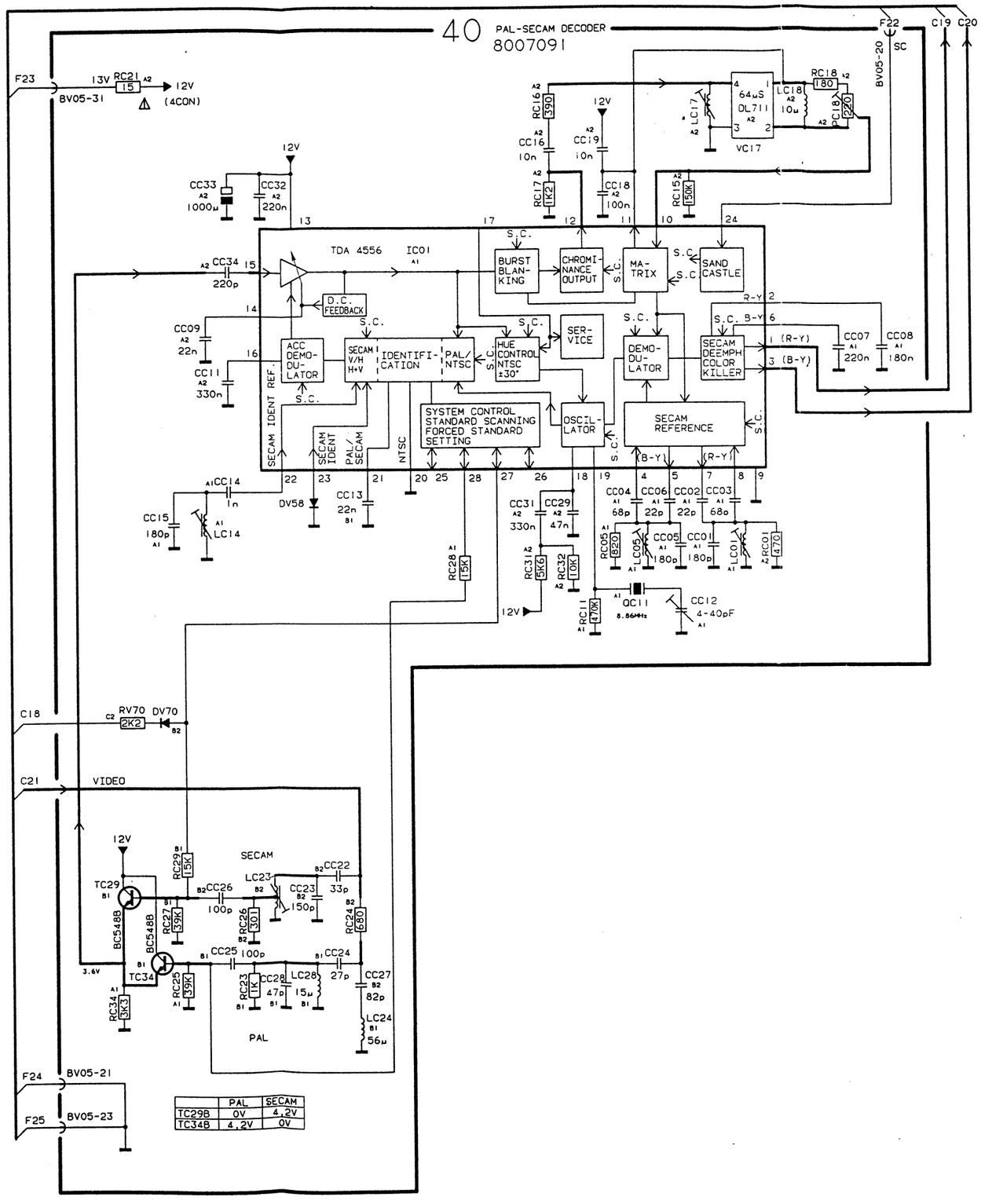


DIAGRAM B IF SYSTEM B/G/I/L



	PAL	SECAM
TC29B	0V	4,2V
TC34B	4,2V	0V

DIAGRAM C PAL/SECAM DECODER, VIDEO OUTPUT

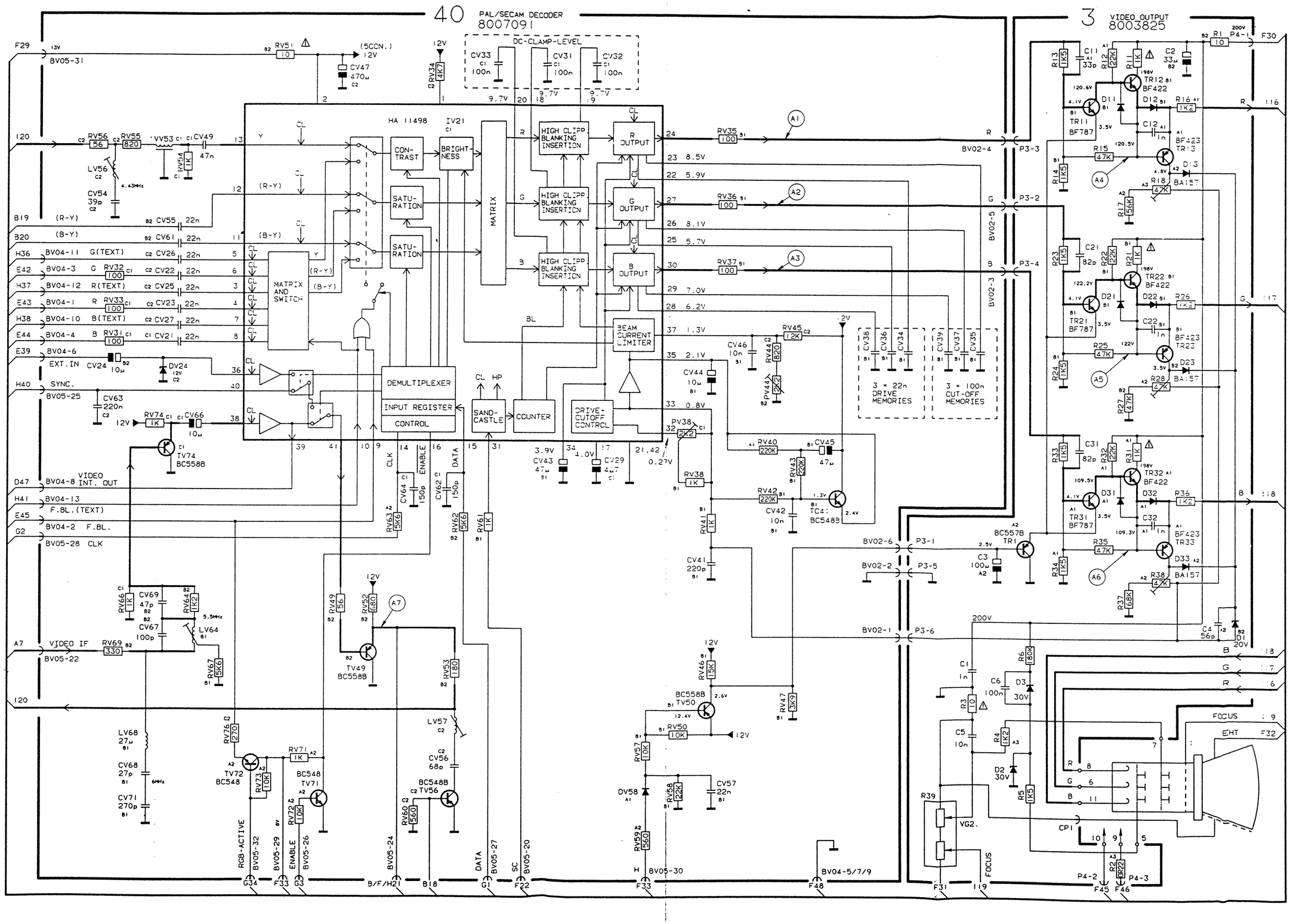


DIAGRAM D STEREO DECODER, SOUND CONTROLS

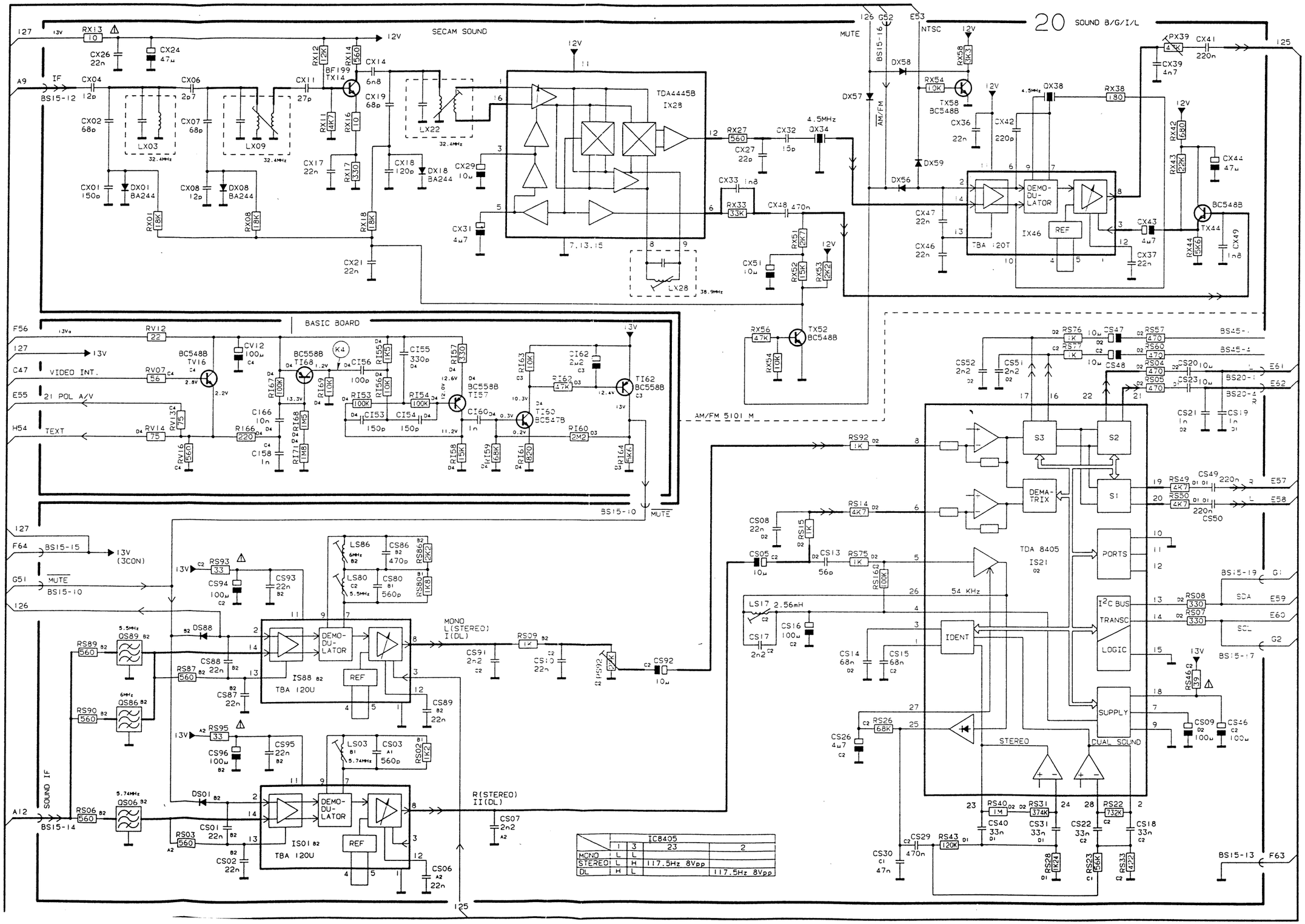


DIAGRAM E AF-AMPLIFIER, LINK INTERFACE, A/V CONNECTIONS

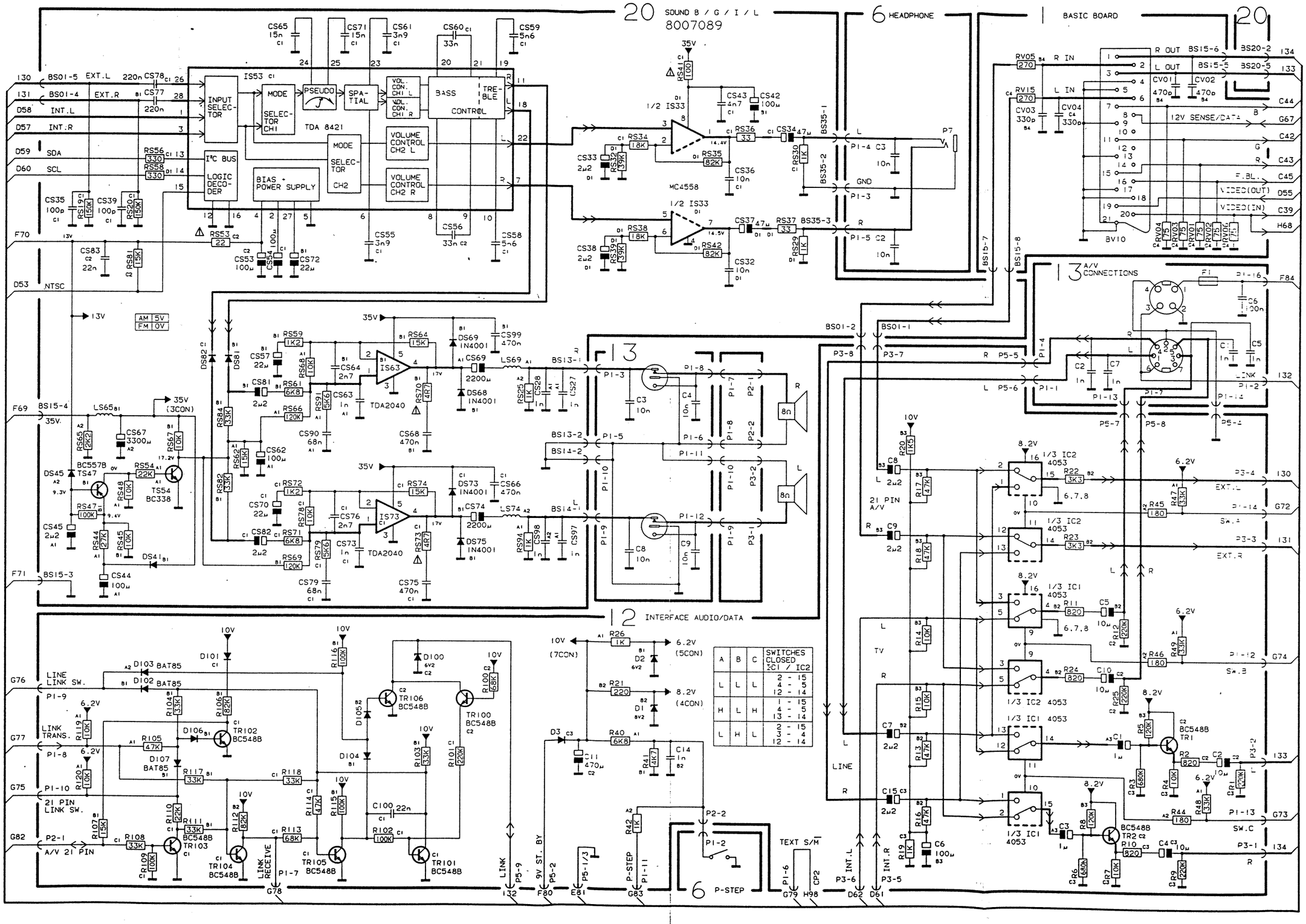


DIAGRAM F POWER SUPPLY, DEFLECTION

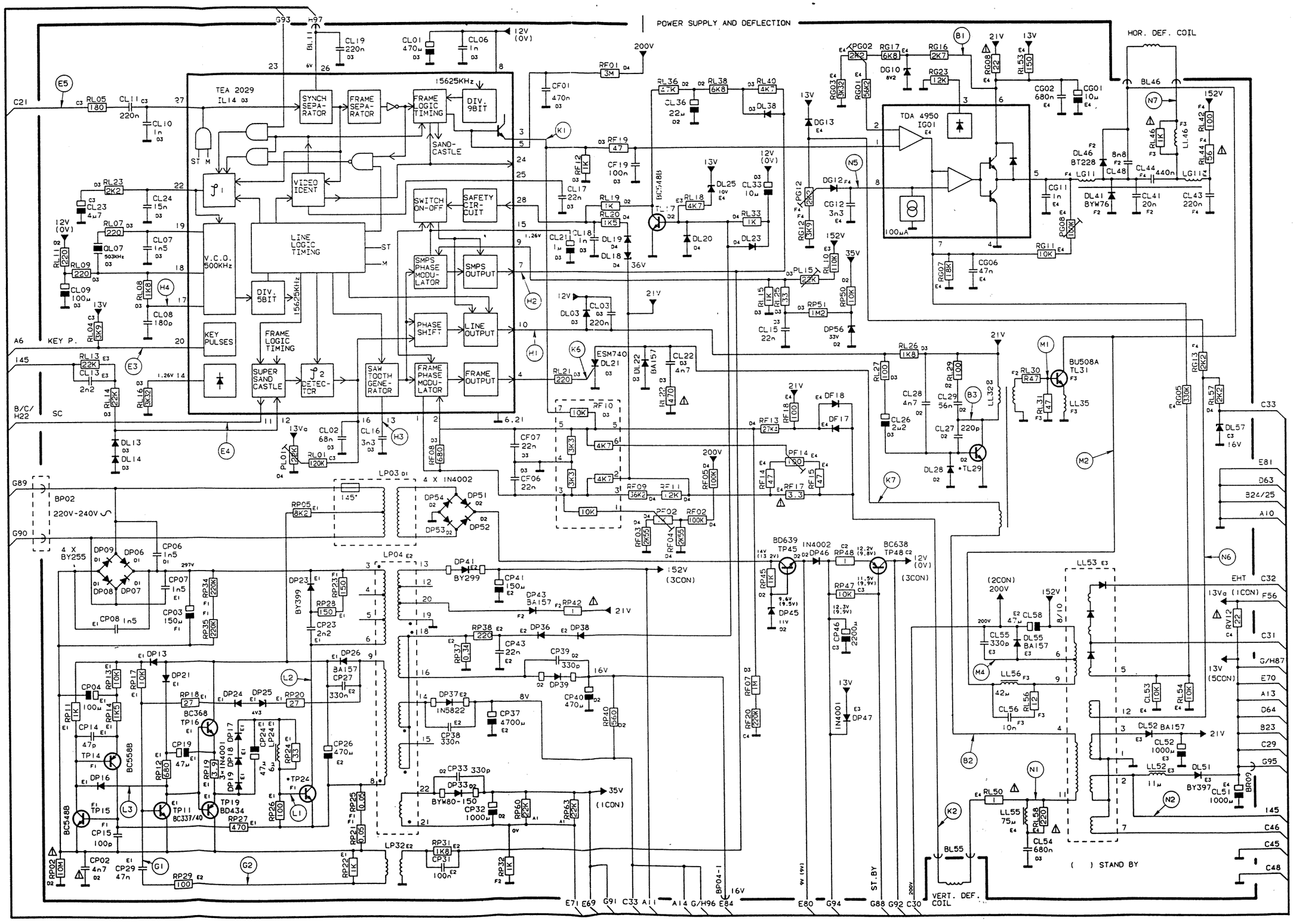


DIAGRAM G IR-RECEIVER, CONTROL, MAINS SWITCH

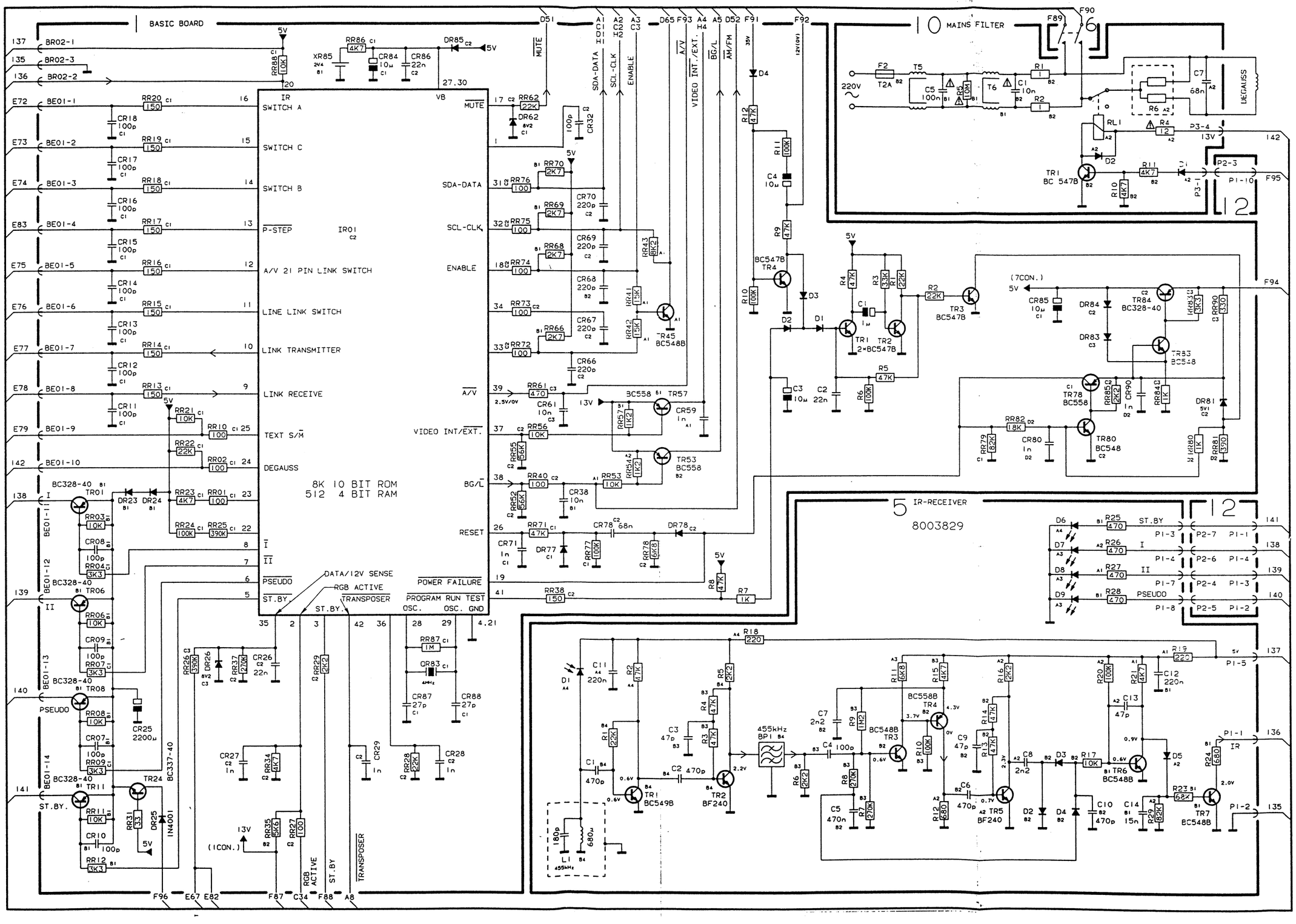
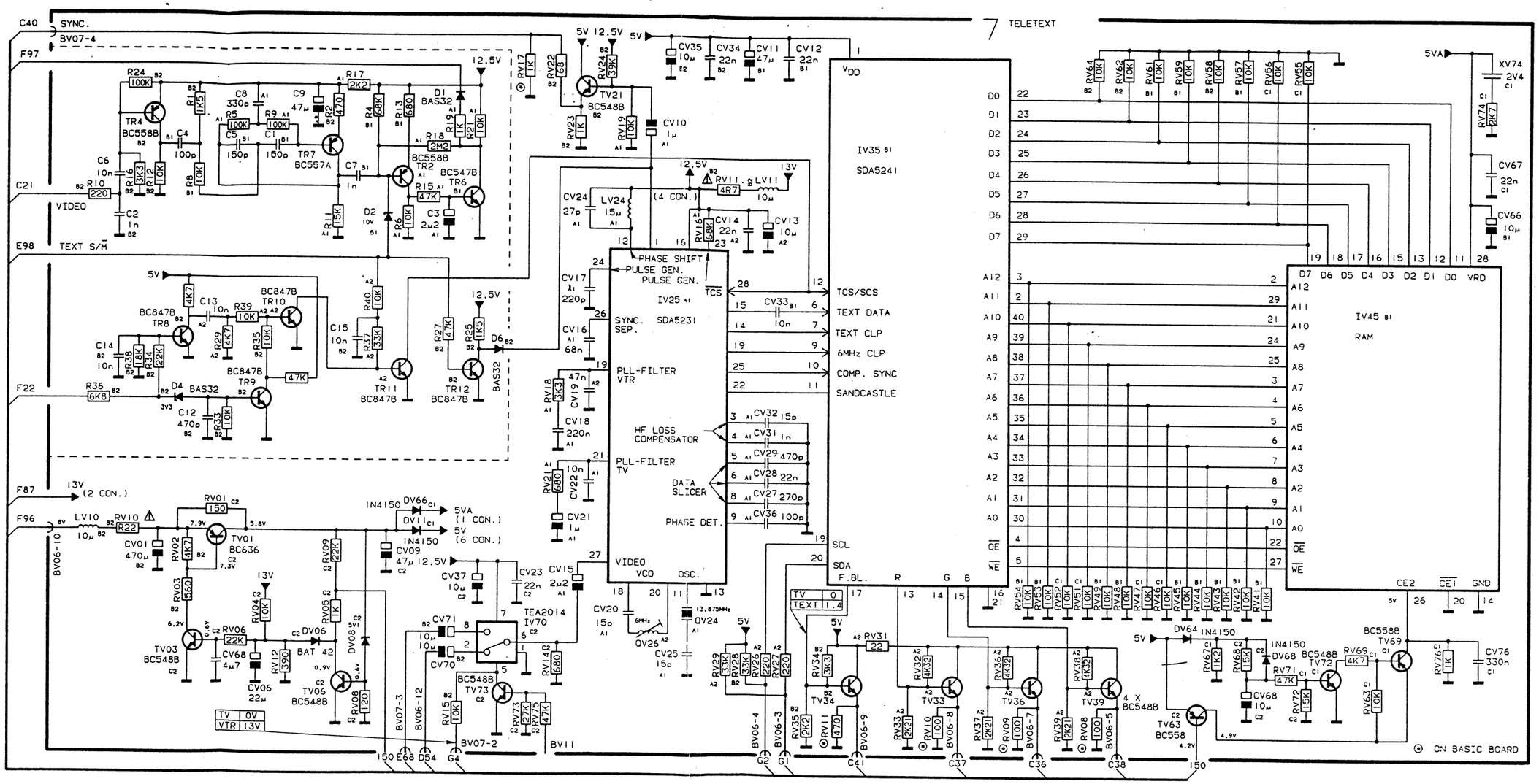


DIAGRAM H TELETEXT DECODER



Bang & Olufsen

1 Basic Board ..... diagr. A-D-E-F-G
page 10-2, 5, 6, 7, 8

3 Video Output ..... diagr. C
page 10-4

4 Speaker Panel ..... diagr. E
page 10-6

5 IR-Receiver ..... diagr. G
page 10-8

6 Program Step/Headphone ..... diagr. E-G
page 10-6, 8

7 Teletext ..... diagr. H
page 10-9

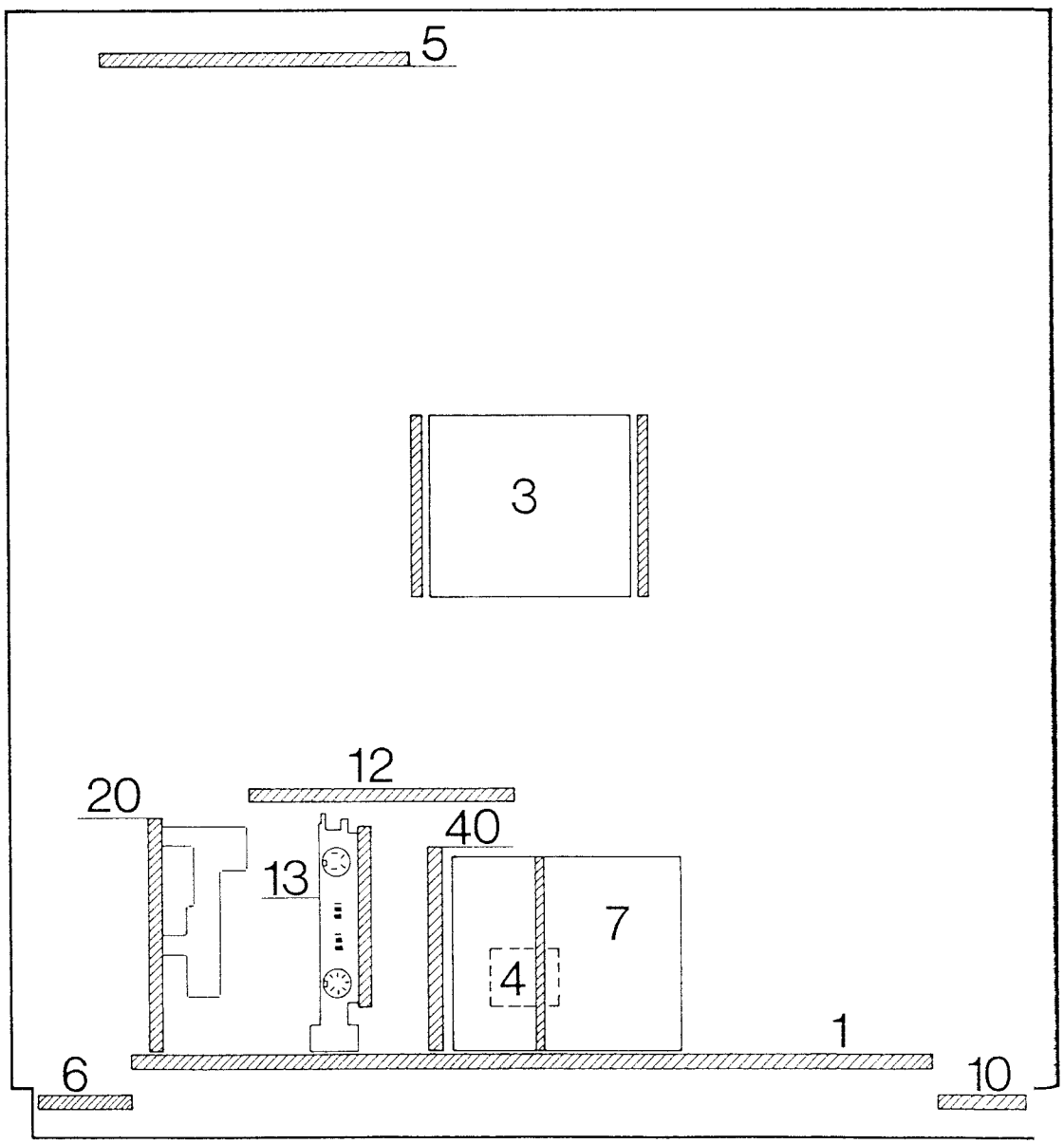
10 Mains Filter ..... diagr. G
page 10-8

12 Interface Audio/Data ..... diagr. E-G
page 10-6, 8

13 A/V Connections ..... diagr. E
page 10-6

20 Sound B/G/I/L/M ..... diagr. D-E
page 10-5, 6

40 Pal/Secam Decoder ..... diagr. B-C
page 10-3, 4



Beovision MX4500

Bang & Olufsen

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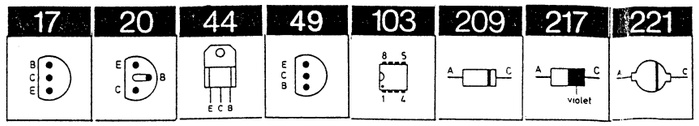
LIST OF ELECTRICAL PARTS



Resistors not referred to are standard, see page 3-12

PCB 1, 8053220 Basic Board incl. Transposer

PCB 1, 8053276 Basic Board excl. Transposer FTZ

IG01	8340764	**103**	TDA 4950				
TR42	8320509	**20**	BC 548B				
DP39	8300647	**221**	S 217D				
RF09	5021129	36.5 kΩ 1%		RL10	5021131	110 kΩ 1%	
RF13	5021130	27.4 kΩ 1%		RL56	5021132	12 Ω 2W	
CL28	4010063	4.7 nF 10% 63V		CP39	4010062	330 pF 10% 63V	
CL44	4130457	330 nF 250V		CP40	4200275	470 µF -10+100% 40V	
CL48	4130458	8.8 nF 1500V		CP41	4200862	100 µF 250V	
LG11	8022305	Coil		LL56	8022307	Coil 42 µH	
LL46	8022306	Coil		LP04	8014098	Transformer	
LL53	8014097	Transformer					
BP04	7220462	Plug 3/3 pole					
	6275770	Cable tray w/main cable					
	6270374	Focus cable					

All other parts are identical with those on pp 3-1 – 3-4

PCB 3, 8003825 Video Output

TR1	8320503	**20**	BC 557B	TR22	8320505	**49**	BF 422
TR11	8320440	**44**	BF 869	TR23*	8320631	**17**	BF 423
TR12	8320505	**49**	BF 422	TR31	8320440	**44**	BF 869
TR13*	8320631	**17**	BF 423	TR32	8320505	**49**	BF 422
TR21	8320440	**44**	BF 869	TR33*	8320631	**17**	BF 423
D1	8300194	**209**	Z20V 5%	D21-22	8300058	**209**	1N 4148
D2-3	8300210	**209**	Z30V 5%	D23	8300518	**217**	BA 157
D11-12	8300058	**209**	1N 4148	D31-32	8300058	**209**	1N 4148
D13	8300518	**217**	BA 157	D33	8300518	**217**	BA 157
R2	5020812	0.22 Ω 10% 0.4W		R25	5020774	47 kΩ 5% 1W	
R3	5020495	10 Ω 10% 1W		R28	5370350	47 kΩ 20% 0.1W	
R11	5020758	1 kΩ 5% 0.3W		R31	5020758	1 kΩ 5% 0.3W	
R12	5020697	22 kΩ 5% 1W		R32	5020697	22 kΩ 5% 1W	
R15	5020774	47 kΩ 5% 1W		R35	5020774	47 kΩ 5% 1W	
R18	5370350	47 kΩ 20% 0.1W		R38	5370350	47 kΩ 20% 0.1W	
R21	5020758	1 kΩ 5% 0.3W		R39	5390027	Focus + G2	
R22	5020697	22 kΩ 5% 1W					
C1	4010123	1 nF 10% 500V		C11	4000362	56 pF 5% 63V	
C2	4200626	33 µF 20% 250V		C12	4010105	1 nF 10% 63V	
C3	4200628	100 µF 20% 16V		C21	4000204	100 pF 5% 63V	
C4	4000155	56 pF 5% 63V		C22	4010105	1 nF 10% 63V	
C5	4010165	10 nF 20% 2kV		C31	4000204	100 pF 5% 63V	
C6	4130306	100 nF 10% 63V		C32	4010105	1 nF 10% 63V	

* Specially selected or adapted sample

11-1

PCB 4, 8007136 Speaker Panel

PCB 5, 8003829 IR-Receiver

See page 3-5

PCB 6, 8007137 Program Step/Headphone

C2-3	4010041	10 nF -20+80% 40V			
S2	7210386	Jack plug	S4	7400318	Switch 1 pole
S3	7450048	Mains switch			
CP1	7500013	Contact pin	CP7	7500013	Contact pin
P1	7220585	Plug 5 pole			

PCB 7, 8003914 Teletext

See page 3-5

PCB 10, 8007138 Mains Filter

TR1	8320097	**20**	BC 547B		
D1-2	8300058	**209**	1N 4148		
R1-2	5100365	1 Ω 10% 4W	R5	5011209	10 MΩ 5% 1/2W
R4	5020877	12 Ω 10% 0.25W	R6	5230009	40+1000 Ω 265V
C1	4130443	10 nF 20% 380V	C7	4130100	68 nF 10% 250V
C5	4130279	100 nF 20% 275V			
RL1	7600090	Relay 12V			
T5	8022269	Coil 2x0.4 mH	T6	8022268	Coil 2x36 mH
F1	6600009	Fuse 2A		7200066	Fuse holder
CP1-16	7500013	Contact pin			
P2	7220686	Plug 7 pole			

PCB 12, 8003830 Interface Audio/Data

All other parts are identical with those on page 3-7

PCB 13, 8007061 A/V Connections

C1-2	4010105	1 nF 10% 63V	C6	4130230	100 nF 20% 63V
C3-4	4010106	10 nF -20+80% 40V	C7	4010105	1 nF 10% 63V
C5	4010105	1 nF 10% 63V	C8-9	4010106	10 nF -20+80% 40V
S1	6600090	Fuse			
P1	7220436	Plug 17/17 pole			

PCB 20, 8007089 Sound B/G/I/L/M

See page 3-8

PCB 40, 8007091 Pal/Secam Decoder

See page 3-10

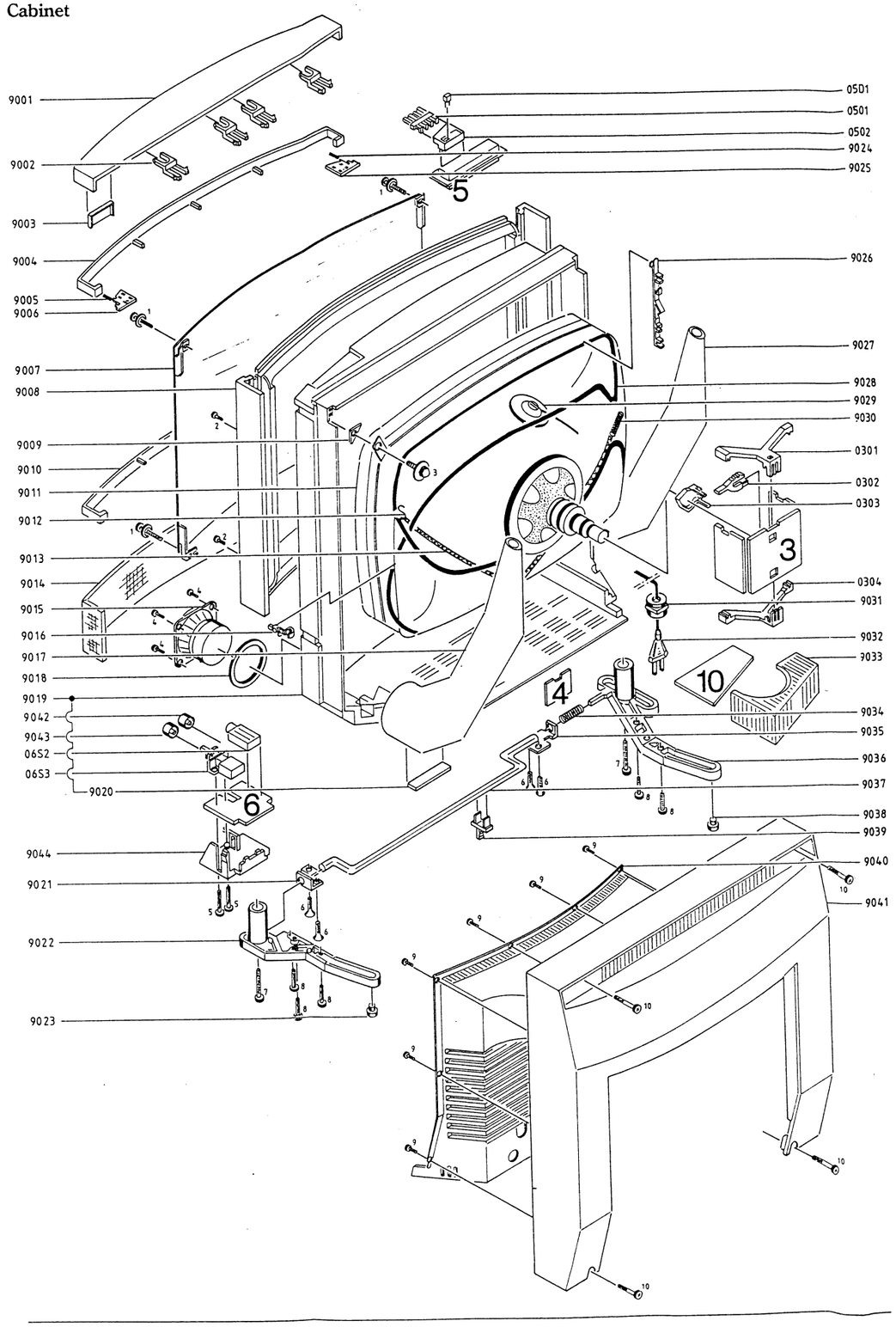
11-1

P1	7220428	Plug 6/6 pole	P4	7220625	Plug 3 pole
P2	7210273	Socket 6/6 pole	P5	7200065	Socket/picture tube
P3	7220624	Plug 6 pole			
CP1	6031925	Lead to ground wire	CP2	6032295	Lead to chassis

12-1

12-1

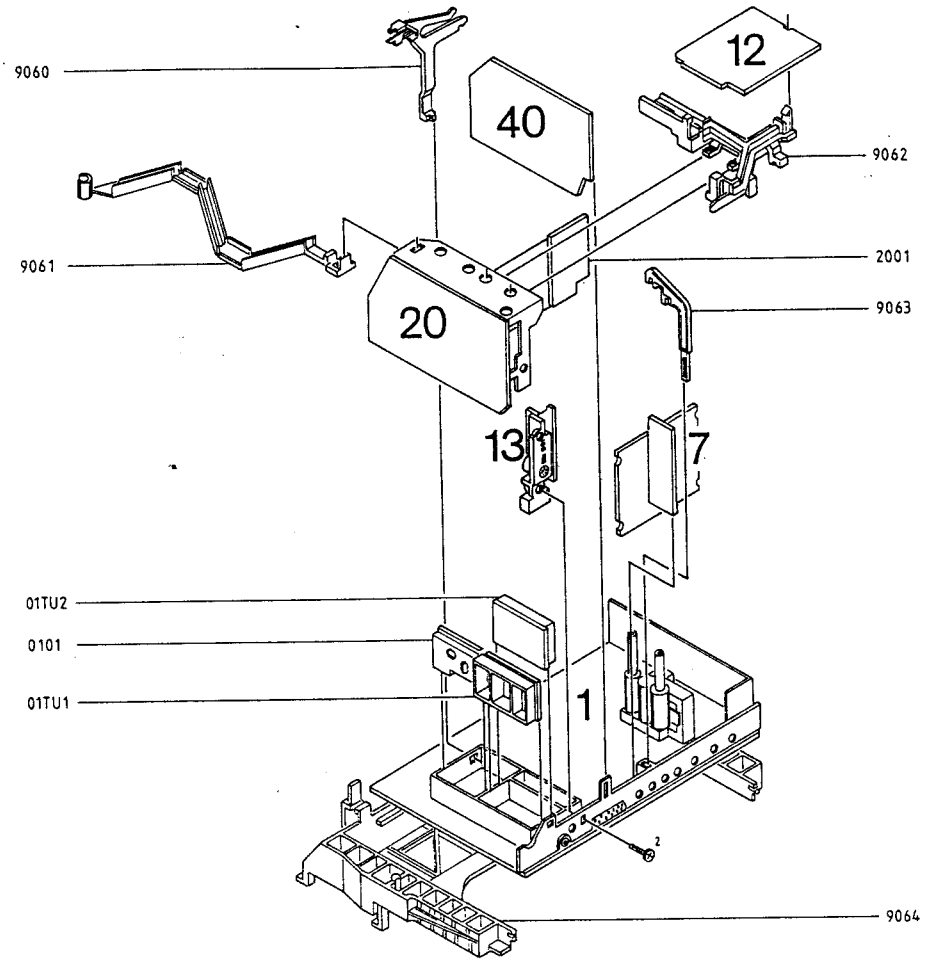
LIST OF MECHANICAL PARTS
Cabinet



Cabinet

03Modul	8003825	PCB 3, Video Output
0301	3152558	Holder
0302	3152583	Holder f/focus contact
0303	3164671	Cap f/socket
0304	3152558	Holder
04Modul	8007136	PCB 4, Speaker Panel
05Modul	8003829	PCB 5, IR-Receiver
0501	3375050	Lens
0502	3131313	Housing
05D1	8330145	Diode BPW 82
06Modul	8007137	PCB 6, Program Step/Headphone
06S2	7210386	Jack plug
06S3	7450048	Mains switch
10Modul	8007138	PCB 10, Mains Filter
9001	3450691	Lid
9002	2391070	Hinge
9003	3322092	Window
9004	3450701	Cap
9005	3907059	Rubber
9006	3164687	Holder
9007	3450711	Contrast screen
9008	3320106	Front frame w/rubber string
	3950029	Rubber string
9009	2640053	Spacer
9010	3450913	Cap
9011	8200060	Picture tube
9012	2510119	Clamp
9013	7510036	Ground current
9014	3450709	Loudspeaker panel
9015	8480164	Loudspeaker
9016	3152413	Holder
9017	3132103	Loudspeaker damping tube w/cotton
9018	3340074	Gasket
9019	3320131	Chassis w/foot
	3946083	Tightening, side
	3946084	Tightening, top/bottom
9020	3103287	Foot
9021	3031129	Fitting f/tilting foot
9022	3031157	Fitting f/bottom
9023	3035032	Rubber foot
9024	3907059	Rubber
9025	3164687	Holder
9026	3152414	Holder
9027	3132103	Loudspeaker damping tube w/cotton
9028	8022280	Degaussing coil
9029	6270364	EHT cable
9030	2810189	Spring
9031	3034045	Holder f/mains lead
9032	6275818	Mains lead w/euro plug
	6275820	Mains lead AUS
	6276070	Mains lead FTZ
9033	3152556	Holder
9034	2819237	Spring
9035	3031175	Fitting f/tilting foot
9036	3031234	Fitting f/bottom
9037	3103238	Tilting foot
9038	3035032	Rubber foot
9039	3152566	Holder f/tilting foot
9040	3430390	Back cover
9041	3414244	Back cover, red
	3414245	Back cover, white
	3414246	Back cover, black
	3414248	Back cover, blue
	3414249	Back cover, grey
9042	2776033	Press button – STEP
9043	2776032	Press button – ●
9044	3152557	Holder

El-Chassis



01Modul	8053220	PCB 1, Basic Board incl. Transposer
	8053276	PCB 1, Basic Board excl. Transposer FTZ
0101	8007021	Transposer
01TU1	8050115	VHF Tuner
01TU2	8050116	UHF Tuner
07Modul	8003815	PCB 7, Teletext
12Modul	8003830	PCB 12, Interface Audio/Data
13Modul	8007061	PCB 13, A/V Connections
20Modul	8007089	PCB 20, Sound B/G/I/L/M
2001	8007090	AM/FM Sound
40Modul	8007091	PCB 40, Pal/Secam Decoder
9060	3152662	Holder f/PCB 20
9061	3152555	Cable tray
	6275770	Cable tray w/main cable
9062	3152559	Holder f/PCB 12
9063	3152698	Holder f/PCB 7
9064	3152582	Holder f/PCB 1

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Survey of screws

1	2015129	Screw 3.5 x 12 mm
2	2013123	Screw 3 x 10 mm
3	2044048	Screw w/washer 5 x 25 mm
4	2013106	Screw 2.9 x 16 mm
5	2039037	Screw 3 x 16 mm
6	2019015	Screw 4 x 14 mm
7	2021003	Screw 5 x 35 mm
8	2019011	Screw 4 x 16 mm
9	2019017	Screw 4 x 10 mm
10	2021010	Screw 5 x 25 mm

Parts not shown

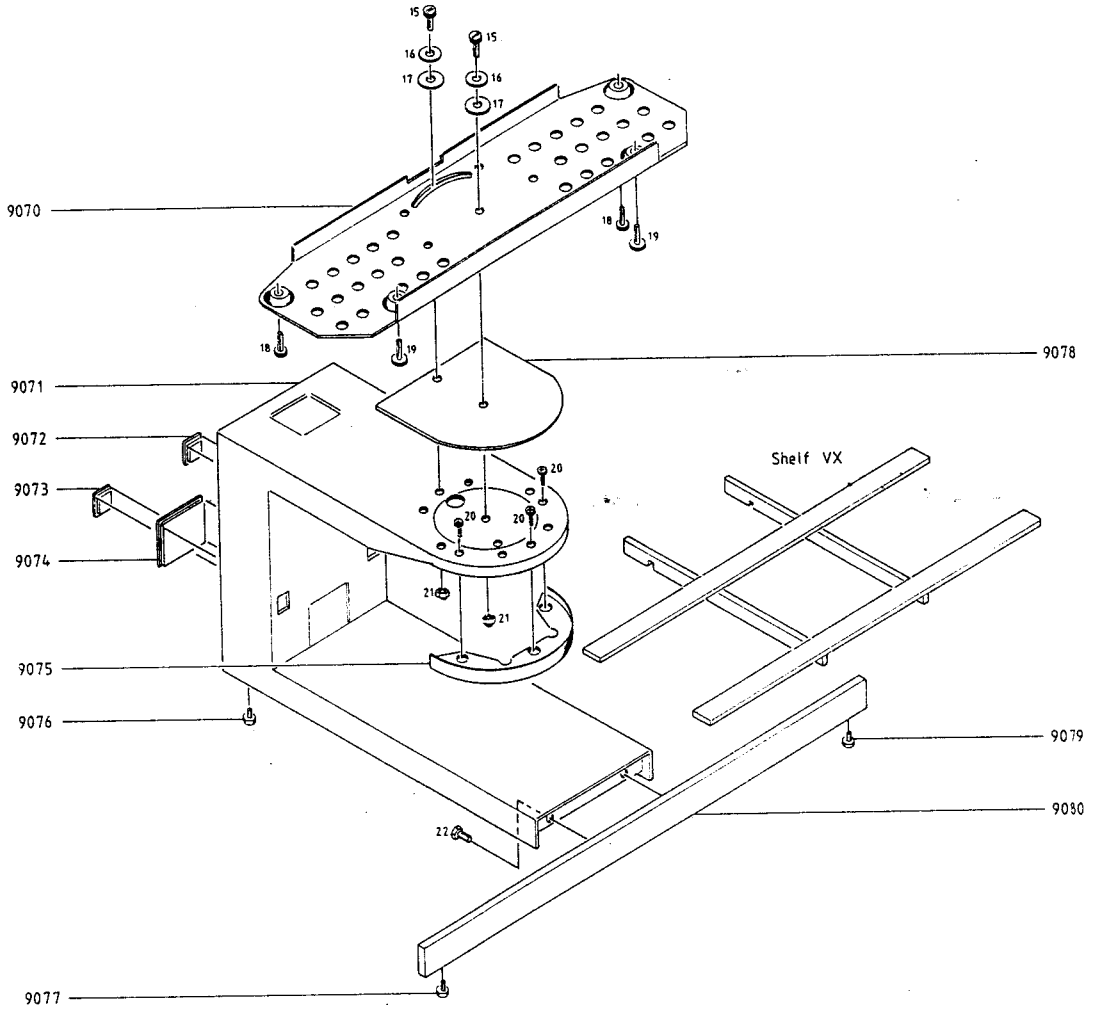
3391982	Carton f/Beolink 1000
3397637	Foam packing
3392015	Outer carton
3503524	Owner's manual, Danish
3503525	Owner's manual, Swedish
3503526	Owner's manual, Finnish
3503527	Owner's manual, English
3503528	Owner's manual, German
3503529	Owner's manual, Dutch
3503530	Owner's manual, French
3503532	Owner's manual, Italian
3503533	Owner's manual, Spannish

Accessories

Beolink 1000 Terminal

See the service manual
MASTER CONTROL LINK (3538711)

Stand 5000 8930766



9070	3124117	Mounting plate
9071	3100036	Frame
9072	3341072	Cover, square
9073	3341072	Cover, square
9074	3341071	Cover, square
9075	3164735	Cover, round
9076	3035055	Rubber foot
9077	3035055	Rubber foot
9078	3915044	Gasket
9079	3035055	Rubber foot
9080	3450721	Rail
	3390378	Bag w/screws and washers
	3392043	Outer carton
	3392078	Carton
	3397654	Foam packing
	3397689	Foam block
	3543092	Installation guide

Survey of screws, washers and nuts

15	2046024	Screw 6x16 mm
16	2622413	Washer
17	2622414	Washer PVC
18	2044035	Screw 5x10 mm
19	2021011	Screw 5x15 mm
20	2011039	Screw 2.5x10 mm
21	2380130	Nut
22	2046030	Screw 6x12 mm

Shelf VX 8930776

Not included in Stand 5000

JUSTERINGSVEJLEDNIING

Netdel, 1PL15:

Et DC-voltmeter tilsluttes ben 10 på linieudgangs-transformatoren 1LL53.
Potentiometeret 1PL15 justeres til 152 V.

Alle øvrige justeringer, se afsnit 5.

ADJUSTMENTS

Power-supply, 1PL15:

Connect a DC voltmeter to pin 10 of the EHT-transformer 1LL53.
Adjust the potentiometer 1PL15 to 152 V.

All other adjustments, see section 5.

JUSTIERUNGEN

Netzteil, 1PL15:

An Stift 10 des Zeilenausgangstransformators 1LL53 einen Gleichstromspannungsmesser anschließen.
Das Potentiometer 1PL15 auf 152 V einstellen.

Alle übrigen Justierungen, siehe Abschnitt 5.

REGLAGES

Bloc d'alimentation, 1PL15:

Raccorder un voltmètre cc à la borne 10 du transformateur de sortie de ligne 1LL53.
Régler le potentiomètre 1PL15 sur 152 V.

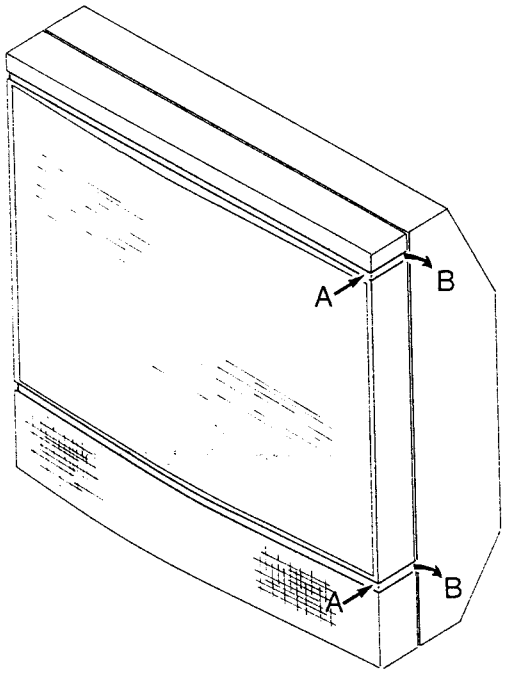
Tous les autres réglages, voir section 5.

ADSKILLELSE

Demontering af kontrastskærmen

DISASSEMBLY

Removal of contrast screen



Pyntelisterne over og under kontrastskærmen løsnes ved at trykke listen ind (A) og samtidig trække ud i pilen B's retning. Listerne kan nu frigøres hele vejen rundt.

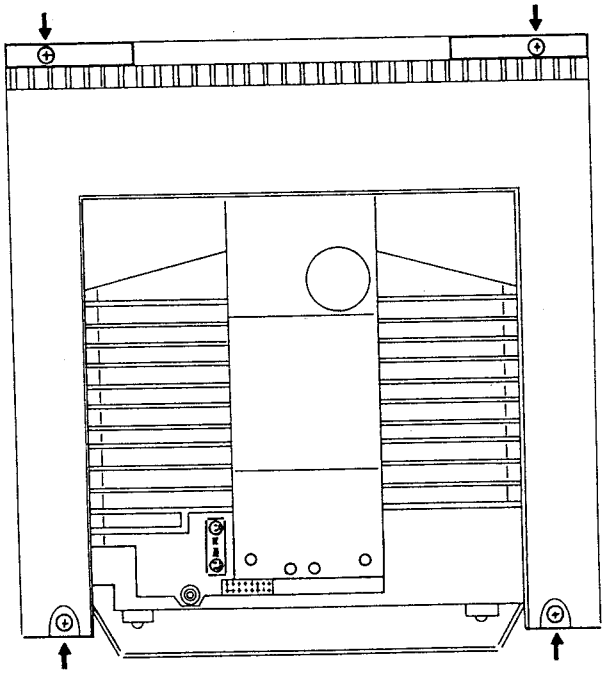
I hvert af de fire hjørner sidder en skrue som skrues ud, hvorefter kontrastskærmen er fri.

Loosen the upper and lower plastic strips by firmly pressing the strips in one side (A) and simultaneously pulling at the end of the strips in the direction of the arrow B. The strips are now loose and can be removed.

Loosen the screw in each of the four corners. The contrast screen can now be removed.

Bagpart

Rear part



De fire skruer løsnes, og bagparten trækkes lige bagud.

Loosen the four screws and then remove the rear part by pulling straight outwards.

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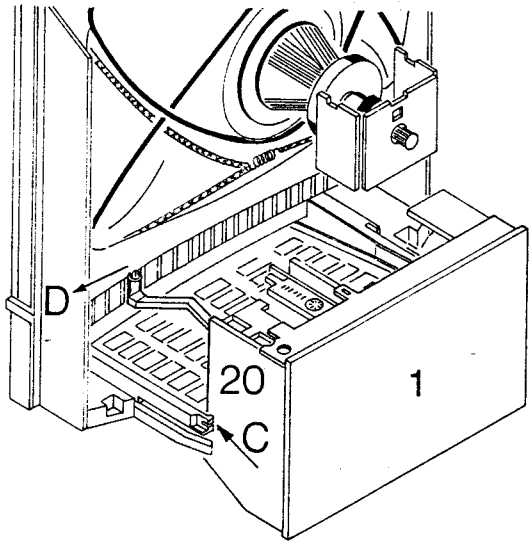
Serviceposition

Service position



Chassiset frigøres fra rammen i bunden ved at frigøre låsetappene C ved chassisets forreste kanter. Herefter kan chassiset trækkes bagud.

Chassiset sættes i serviceposition, ved at det trækkes fri og løftes op.

Ledningsbakken kan løsnes fra kabinettet, ved at trække denne i pilen D's retning.

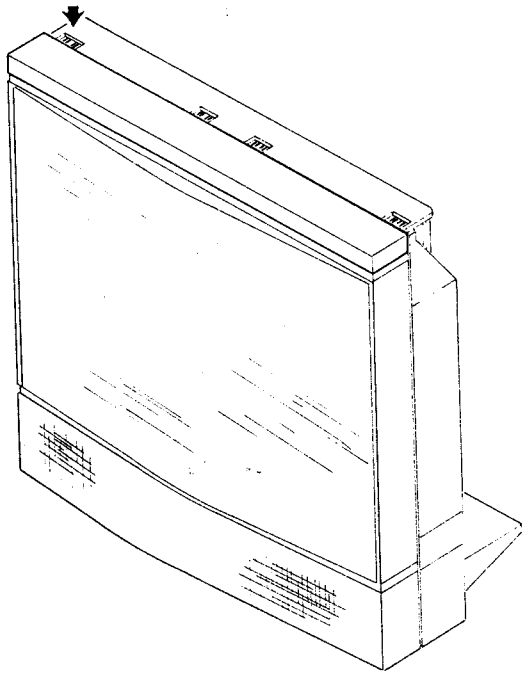
To detach the chassis from the frame in the bottom of the set, release the two locks C at the front edges of the chassis. The chassis can now be pulled outwards.

Place the chassis in the service position by pulling it outwards and lifting it.

Detach the cable tray from the cabinet by pulling it in the direction of the arrow D.

Toppanel

Top panel



Panelet løsnes i den ene side, ved at låsen aktiveres med en skruetrækker.

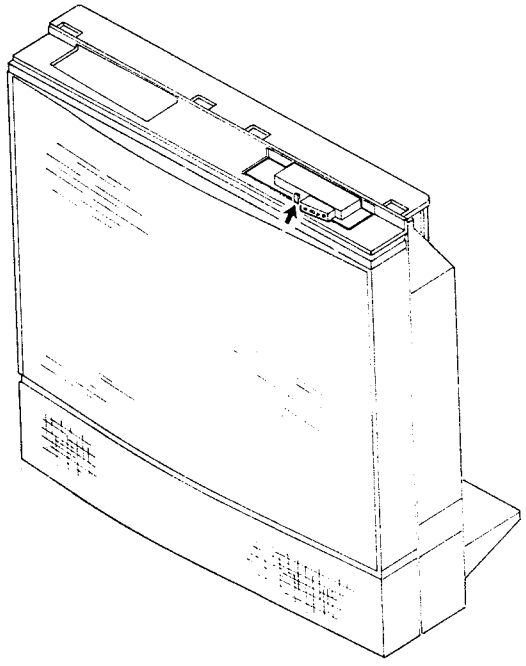
Toppanelet kan nu fjernes.

Loosen the panel in one side by releasing the lock with a screwdriver.

The top panel can now be removed.

PCB 05 IR-modtager

PCB 05 IR-receiver



Låsen løsnes med en skruetrækker, og PCB'en tages ud, ved at den løftes i den forreste kant.

NB! Ved demontering af IR-modtagerens hus skal IR-modtagerdioden loddes ud.

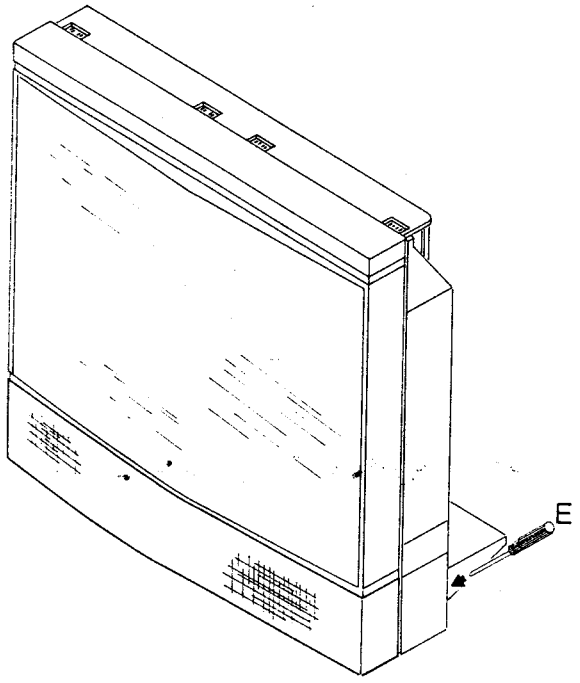
Release the lock with a screwdriver and remove the PCB by lifting it at its front.

Note! If the housing of the IR-receiver is to be removed, the IR-receiver diode must be desoldered.

Bang & Olufsen

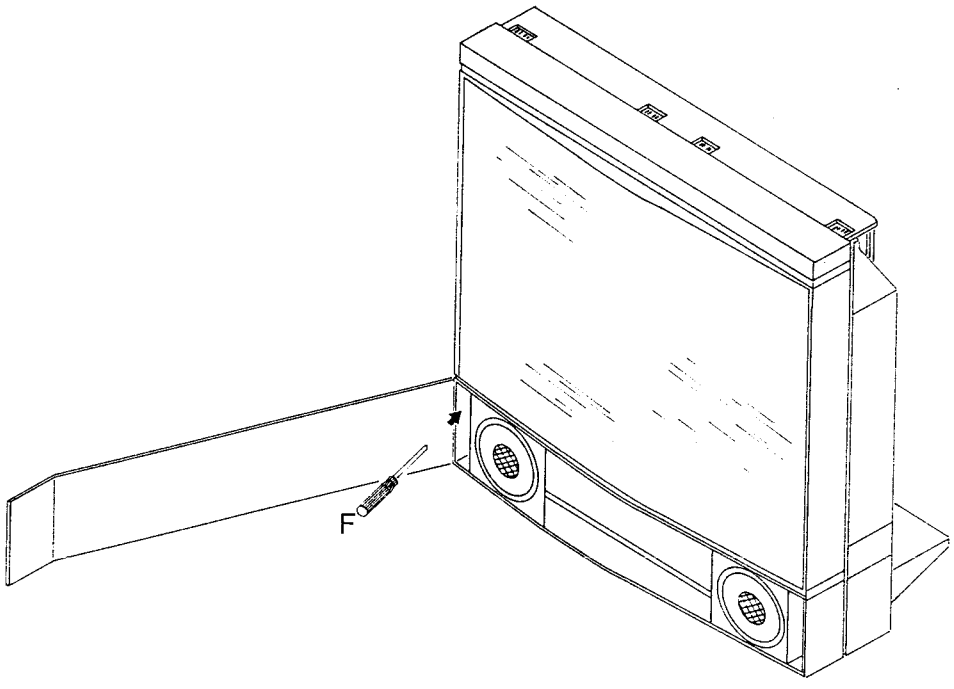
Højttalerpanel

Loudspeaker panel



Panelet frigøres i venstre side (set bagfra) ved at løsne låsene med en skruetrækker igennem hullerne i kabinettet (E). Herefter trækkes panelet fri langs kanten.

Loosen the panel in the left-hand side (seen from behind) by inserting a screwdriver into the holes in the cabinet (E) to release the locks. Loosen the panel at the front of the set.



Panelet frigøres i den anden side ved at løsne låsene forfra med en skruetrækker mellem panelet og kabinettet (F).

To detach the panel in the opposite side, release the locks by inserting a screwdriver between the panel and the cabinet (F).

SLUTAFPRØVNING

Denne afprøvning kan benyttes som kontrol, efter at reparationen er afsluttet.
NB! I apparater fra S/W version 2.0 er de mulige programnumre 1-32 i stedet for 0-31.

Tilslutninger

TV'et tilsluttes lysnettet og et antennesignal.

Nærbetjening

Hovedafbryderen aktiveres → Stand-by indikator lyser

(STEP) aktiveres → Starter på P1, hvis TV'et har været frakoblet netspændingen, og ellers på sidst benyttede program

Beolink 1000 fjernbetjening

Tænd

[TV] → Starter på sidst benyttede program

0-31 → Starter på valgte programnummer

Tune

Direkte frekvensvalg
Indstilling af ønsket frekvens, f.eks. 543MHz (kanal 30), på et programnummer ml. 0 og 31.
Omregningstabel for frekvens/kanal findes i betjeningsvejledningen (Frekvensoversigt).

[GO TO] → Grønt display
[5] [4] [3] → Gult display

Store

Den indstillede frekvens kan lægges i hukommelsen på et programnummer mellem 0 og 31.

[STORE] → Rødt display
[1] → Programnummer 1 vælges
[STORE] → Grønt display
[●] → Stand-by
[1] → Den på programnummer 1 lagrede frekvens vises

Tune

Søgning

Søgning under det valgte programnummer (0-31)

[<<] eller [>>] → Søgning stopper på nærmeste senderfrekvens

Finindstilling

Ønskede frekvens er fundet.
Billedet står ikke skarpt.

[GO TO] → Grønt display
[<<] eller [>>] → FT (fine tune) kan varieres op (+) eller ned (-)

FINAL TEST

This test may be used as a check-up after the repair has been carried out.
NOTE! In sets with S/W version from 2.0 the potential preset numbers are 1-32 instead of 0-31.

Connections

Connect the TV set to the mains supply and an aerial signal.

Direct Operation

Activate the mains switch → The stand-by indicator lights

Activate (STEP) → Starts on P1 if the TV set has been disconnected from the mains supply or else on the programme last seen

Beolink 1000 Remote Control

Switching On

[TV] → Starts on the programme last seen

0-31 → Starts on the preset No selected

Tuning

Direct frequency selection
Setting of a desired frequency, e.g. 543MHz (channel 30), on a preset No between 0 and 31.
Conversion tabel for frequency/channel, see owner's manual (List of frequencies).

[GO TO] → Green display
[5] [4] [3] → Yellow display

Store

The set frequency can be stored on a preset No between 0 and 31.

[STORE] → Red display
[1] → Selection of preset No 1
[SOUND] → Green display
[●] → Stand-by
[1] → The frequency stored on the selected preset No is shown

Tuning

Search

Search on the selected preset No (0-31)

[<<] or [>>] → The search stops at the closest transmitter frequency

Fine Tuning

The frequency desired has been found.
The picture is not sharp.

[GO TO] → Green display
[<<] or [>>] → FT (fine tuning) may be varied up (+) or down (-)

Teletekst

Kun ved apparater med indbygget teletekst.

TEXT	→ Skifter til tekst-mode
Vælg en side, f.eks. 100	
GO TO 1 0 0	→ Tekstside 100 vises
STORE 2 STORE	→ Tekstside 100 lagres på hukommelsesside 2
◉	→ Stand-by
TEXT 2	→ Hukommelsesside 2, tekstside 100 vises

Billede

PICTURE	→ »BRILLIANCE xx«, grønt display
△ eller ▽	→ Lys varieres mellem 0 og 31
PICTURE	→ »COLOUR xx«, grønt display
△ eller ▽	→ Farvemætningen varieres mellem 0 og 60
PICTURE	→ »CONTRAST xx«, grønt display
△ eller ▽	→ Kontrast varieres mellem 0 og 31

Lyd

SOUND	→ »VOLUME xx«, grønt display
△ eller ▽	→ volume varieres mellem 0 og 40
SOUND	→ »BALANCE x«, grønt display
△ eller ▽	→ Balance varieres mellem 8 og -8
SOUND	→ »TREBLE x«, grønt display
△ eller ▽	→ Diskantniveauet varieres mellem 5 og -4
SOUND	→ »BASS x«, grønt display
△ eller ▽	→ Basniveauet varieres mellem 5 og -4
SOUND	→ »VOLUME HP xx«, grønt display
△ eller ▽	→ Volume i hovedtelefon varieres mellem 0 og 32

To sprog (System A2)

Ved modtagelse af to-sprogede udsendelser kan der vælges mellem sprog A og B.

TURN	→ Skifter mellem sprog A og sprog B. Indikeres af to røde pile i øverste højre hjørne (◄ = A, ► = B).

Teletext

Only applies to TV sets with built-in teletext.

TEXT	→ Switches into the text mode
Select a page, e.g. 100	
GO TO 1 0 0	→ Shows text page 100
STORE 2 STORE	→ Text page 100 is stored on memory page 2
◉	→ Stand-by
TEXT 2	→ Shows memory page 2, text page 100

Picture

PICTURE	→ "BRILLIANCE xx", green display
△ or ▽	→ Brilliance varies in the range from 0 to 31
PICTURE	→ "COLOUR xx", green display
△ or ▽	→ Colour saturation varies in the range from 0 to 60
PICTURE	→ "CONTRAST xx", green display
△ or ▽	→ Contrast varies in the range from 0 to 31

Sound

SOUND	→ "VOLUME xx", green display
△ or ▽	→ Volume level varies in the range from 0 to 40
SOUND	→ "BALANCE x", green display
△ or ▽	→ Balance level varies in the range from 8 to -8
SOUND	→ "TREBLE x", green display
△ or ▽	→ Treble level varies in the range from 5 to -4
SOUND	→ "BASS x", green display
△ or ▽	→ Bass level varies in the range from 5 to -4
SOUND	→ "VOLUME HP xx", green display
△ or ▽	→ Volume level in head phones varies in the range from 0 to 32

Dual Languages (System A2)

When receiving dual language programmes, language A or B may be selected.

TURN	→ Switches between language A and language B. This is indicated by two red arrows in the upper righthand corner (◄ = A, ► = B)

Stereo lyd

Ved modtagelse af stereo-lyd skifter TV'et automatisk til stereo. Stereo indikeres af to røde pile i øverste højre hjørne.

TURN → Mono-lyd, røde pile slukket
TURN → Stereo-lyd, to røde pile i øverste højre hjørne

Ved skift til anden stereo-udsendelse vil TV'et automatisk skifte til stereo.

Shift funktioner

Tidskonstant

SHIFT 2 → Tidskonstanten ændres til en perfekt synkronisering mellem TV'et og en videobåndoptager (»toggle«-funktion). Indikeres med »A/V« efter programnummeret på skærmen

System B/System L/System M

SHIFT 3 → Systemskift (»toggle«-funktion)

Billede

Der foretages kontrol af geometri, højspænding, fokus, følsomhed, hvid balance, farvespring, opløsning, slæb, skygger, interferens og gråskala.

Stereo Sound

When receiving stereo sound, the TV set automatically switches to stereo. Stereo is indicated by two red arrows in the upper righthand corner.

TURN → Mono sound, no red arrows in the upper righthand corner
TURN → Stereo sound, two red arrows in the upper righthand corner

When switching to another stereo transmission, the TV-set automatically switches to stereo sound.

Shift Functions

Time constant

SHIFT 2 → The time constant is changed into a perfect synchronization between the TV set and a video recorder (toggle function). This is indicated by "A/V" after the preset No

System B/System L/System M

SHIFT 3 → Change of system (toggle function)

Picture

Check geometry, high voltage, focus, sensitivity, white balance, colour switching, resolution, ringing, ghosts, interference and grey scale.

ISOLATIONSTEST

Ethvert apparat skal isolationstestes, efter at det har været adskilt. Testen udføres, når apparatet er samlet igen og er klar til udlevering til kunden.

Der må ikke forekomme overslag under testen!

Isolationstesten udføres på følgende måde:

De to stikben på netstikket kortsluttes og tilsluttes den ene af terminalerne på isolationstesteren. Den anden terminal tilsluttes stelbenet i en af højttaler-stikdåserne.

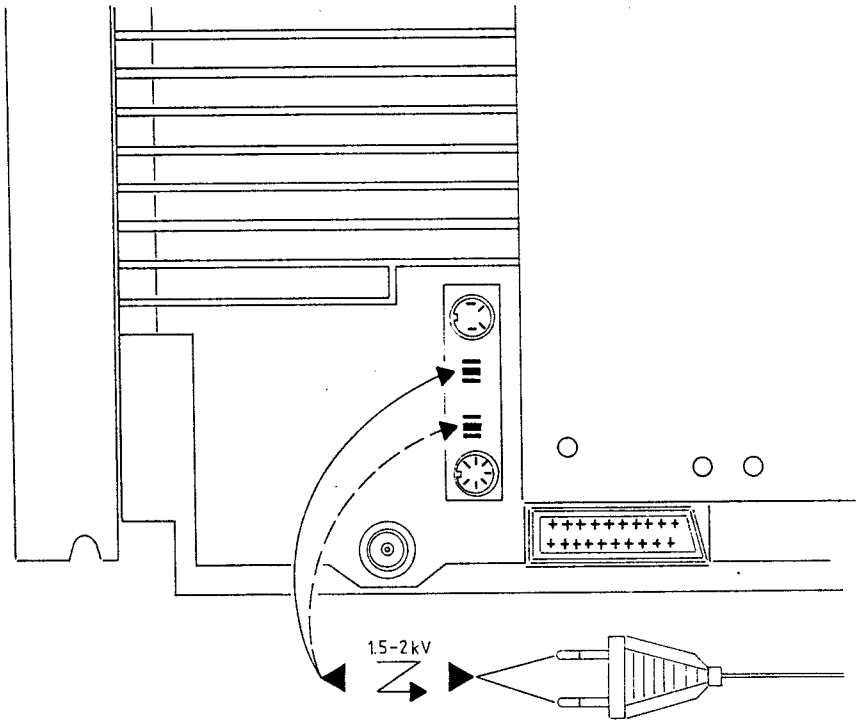
INSULATION TEST

Each set must be insulation tested after having been dismantled. Make the test when the set has been reassembled and is ready to be returned to the customer.

Flashovers must not occur during the testing procedure!

Make the insulation test as follows:

Short-circuit the two pins of the mains plug and connect them to one of the terminals of the insulation tester. Connect the other terminal to the chassis pin of one of the loudspeaker sockets.



OBS!
For at undgå beskadigelser af apparatet er det vigtigt, at begge terminaler på isolationstesteren har virkelig god kontakt.

Spændingsreguleringen på isolationstesteren drejes langsomt op, indtil en spænding på 1,5-2 kV er opnået. Her skal den holdes i ét sekund, hvorefter der langsomt drejes ned for spændingen igen.

NOTE!
To avoid damaging the set it is essential that both terminals of the insulation tester have good contact.

Slowly turn the voltage control of the insulation tester until a voltage of 1.5-2 kV is obtained. Maintain that voltage for one second, then slowly turn it down again.

Bang & Olufsen

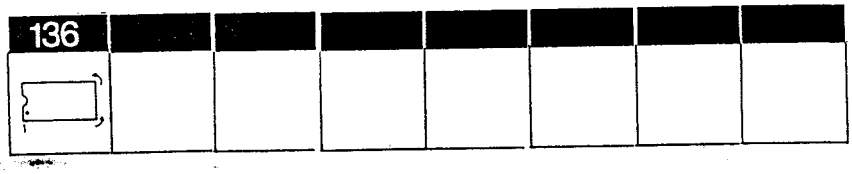
Beovision MX 5000 er identisk med Beovision MX 4500 undtaget fra flg. punkter:

Beovision MX 5000 ist mit Beovision MX 4500 identisch ausgenommen von den folgenden Punkter:

Beovision MX 5000 is identical with Beovision MX 4500 except the following points:

Beovision MX 5000 est identique à Beovision MX 4500 à l'exception des sujets suivants:

LIST OF ELECTRICAL PARTS



1IR01 △	8341156	**136** HD 404919 (16K)

△ indicates that static electricity may destroy the component.

LIST OF MECHANICAL PARTS

(Exploded view see page 12-1)

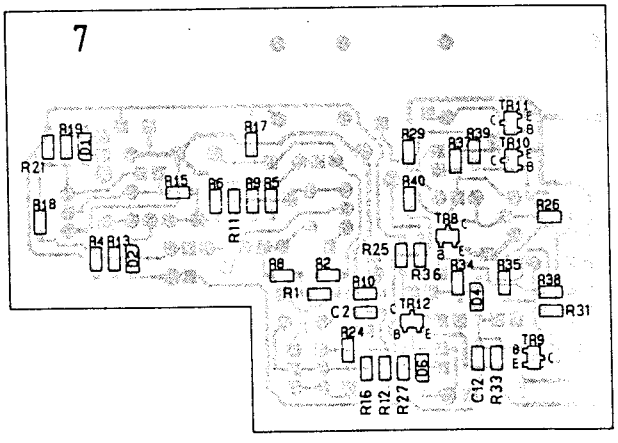
9010	3450710	Cap

3503538	Owner's manual, Danish
3503539	Owner's manual, Swedish
3503540	Owner's manual, Finnish
3503541	Owner's manual, English
3503542	Owner's manual, German
3503543	Owner's manual, Dutch
3503544	Owner's manual, French
3503545	Owner's manual, Italian
3503546	Owner's manual, Spanish

ACCESSORIES

8930806	MB 5000 – Motorized TV base
8930816	MS 5000 – Motorized TV stand

PCB 7, Sub module Teletext

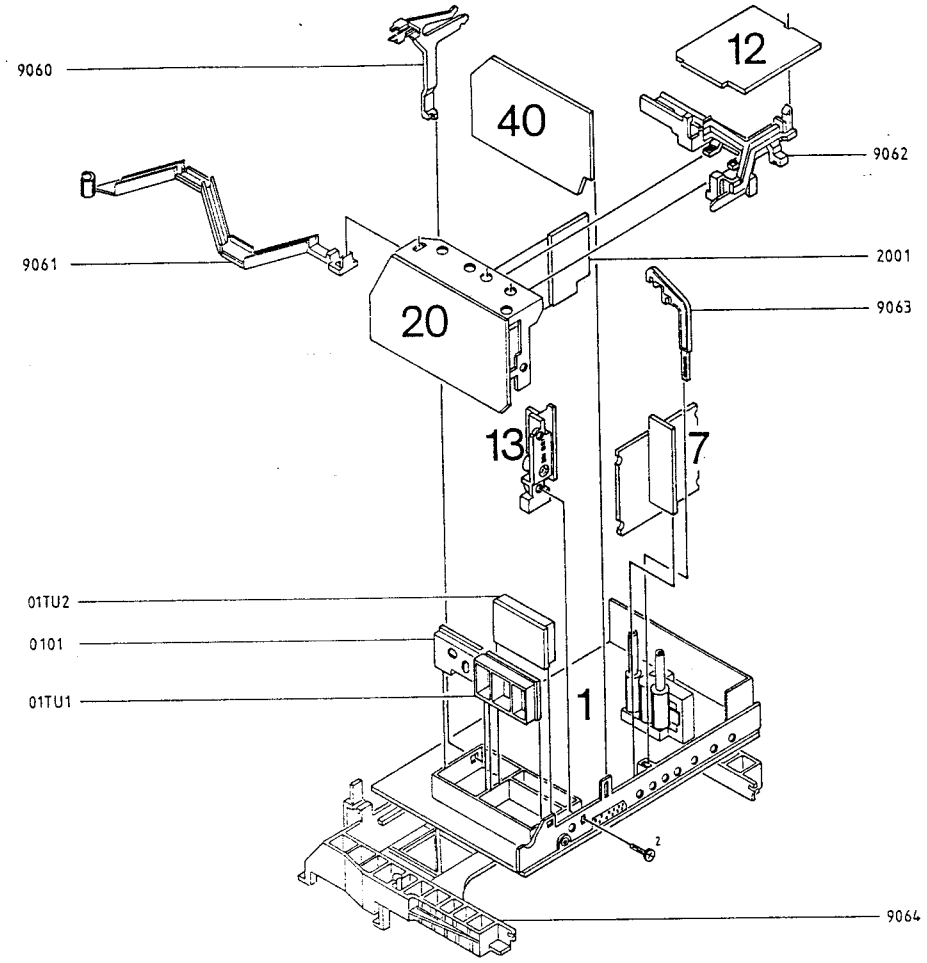


Bang & Olufsen

Beovision MX 5000

Type 3211-3212-3213-3214-3216-
3217-3218

El-Chassis



01Modul	8053220	PCB 1, Basic Board incl. Transposer
	8053276	PCB 1, Basic Board excl. Transposer FTZ
0101	8007021	Transposer
01TU1	8050115	VHF Tuner
01TU2	8050116	UHF Tuner
07Modul	8003815	PCB 7, Teletext
12Modul	8003830	PCB 12, Interface Audio/Data
13Modul	8007061	PCB 13, A/V Connections
20Modul	8007089	PCB 20, Sound B/G/I/L/M
2001	8007090	AM/FM Sound
40Modul	8007091	PCB 40, Pal/Secam Decoder
9060	3152662	Holder f/PCB 20
9061	3152555	Cable tray
	6275770	Cable tray w/main cable
9062	3152559	Holder f/PCB 12
9063	3152698	Holder f/PCB 7
9064	3152582	Holder f/PCB 1

Bang & Olufsen

Survey of screws

1	2015129	Screw 3.5 x 12 mm
2	2013123	Screw 3 x 10 mm
3	2044048	Screw w/washer 5 x 25 mm
4	2013106	Screw 2.9 x 16 mm
5	2039037	Screw 3 x 16 mm
6	2019015	Screw 4 x 14 mm
7	2021003	Screw 5 x 35 mm
8	2019011	Screw 4 x 16 mm
9	2019017	Screw 4 x 10 mm
10	2021010	Screw 5 x 25 mm

Parts not shown

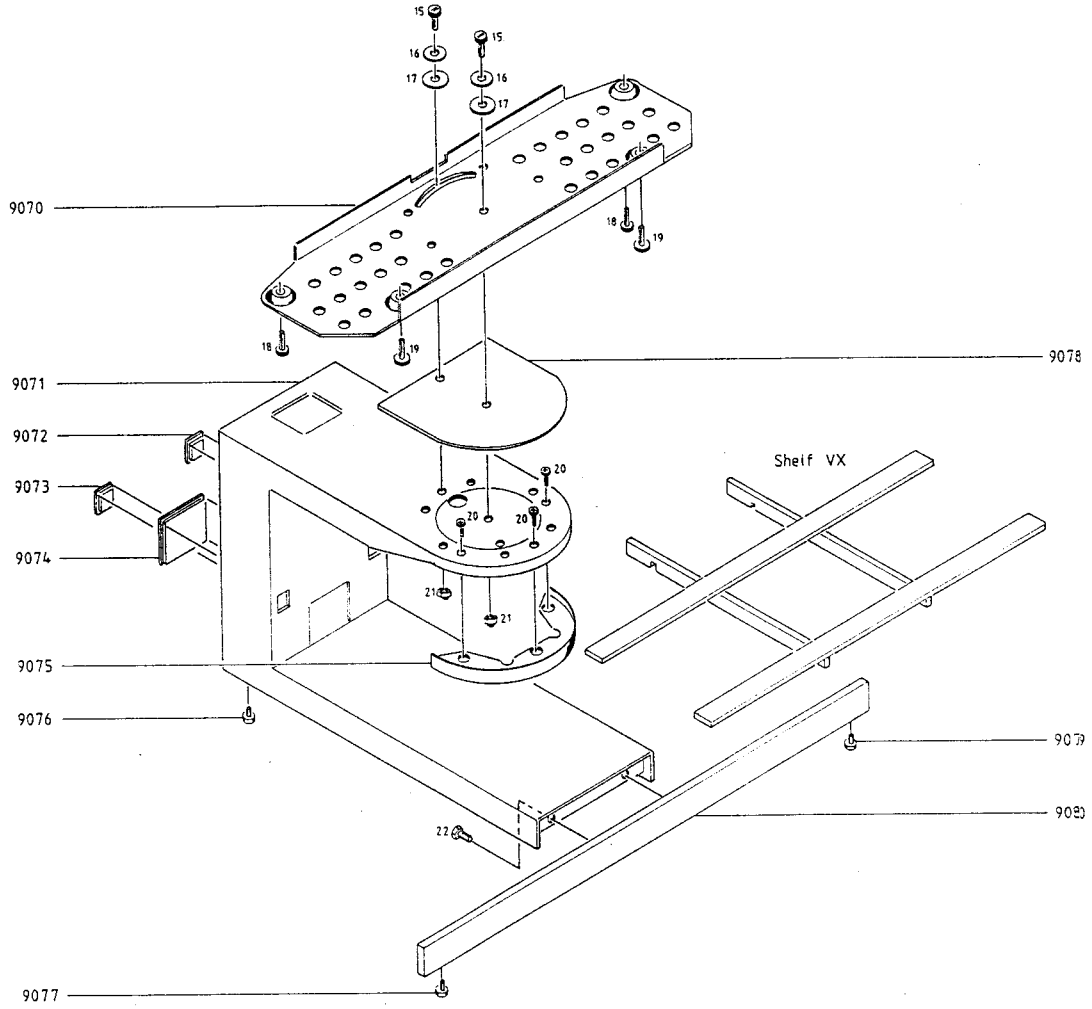
3391982	Carton f/Beolink 1000
3397637	Foam packing
3392015	Outer carton
3503524	Owner's manual, Danish
3503525	Owner's manual, Swedish
3503526	Owner's manual, Finnish
3503527	Owner's manual, English
3503528	Owner's manual, German
3503529	Owner's manual, Dutch
3503530	Owner's manual, French
3503532	Owner's manual, Italian
3503533	Owner's manual, Spannish

Accessories

Beolink 1000 Terminal

See the service manual
MASTER CONTROL LINK (3538711)

Stand 5000 8930766



9070	3124117	Mounting plate
9071	3100036	Frame
9072	3341072	Cover, square
9073	3341072	Cover, square
9074	3341071	Cover, square
9075	3164735	Cover, round
9076	3035055	Rubber foot
9077	3035055	Rubber foot
9078	3915044	Gasket
9079	3035055	Rubber foot
9080	3450721	Rail
	3390378	Bag w/screws and washers
	3392043	Outer carton
	3392078	Carton
	3397654	Foam packing
	3397689	Foam block
	3543092	Installation guide

Survey of screws, washers and nuts

15	2046024	Screw 6x16 mm
16	2622413	Washer
17	2622414	Washer PVC
18	2044035	Screw 5x10 mm
19	2021011	Screw 5x15 mm
20	2011039	Screw 2.5x10 mm
21	2380130	Nut
22	2046030	Screw 6x12 mm

Shelf VX 8930776

Not included in Stand 5000

JUSTERINGSVEJLEDNIING

Netdel, 1PL15:

Et DC-voltmeter tilsluttes ben 10 på linieudgangs-transformatoren 1LL53.
Potentiometeret 1PL15 justeres til 152 V.

Alle øvrige justeringer, se afsnit 5.

ADJUSTMENTS

Power-supply, 1PL15:

Connect a DC voltmeter to pin 10 of the EHT-transformer 1LL53.
Adjust the potentiometer 1PL15 to 152 V.

All other adjustments, see section 5.

JUSTIERUNGEN

Netzteil, 1PL15:

An Stift 10 des Zeilenausgangstransformators 1LL53 einen Gleichstromspannungsmesser anschließen.
Das Potentiometer 1PL15 auf 152 V einstellen.

Alle übrigen Justierungen, siehe Abschnitt 5.

REGLAGES

Bloc d'alimentation, 1PL15:

Raccorder un voltmètre cc à la borne 10 du transformateur de sortie de ligne 1LL53.
Régler le potentiomètre 1PL15 sur 152 V.

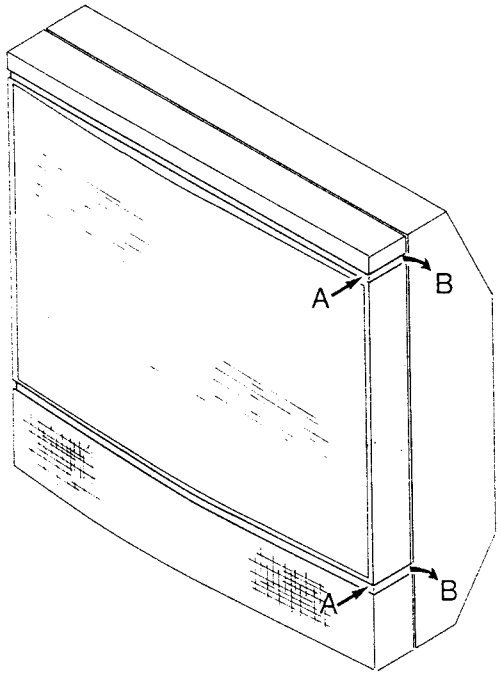
Tous les autres réglages, voir section 5.

ADSKILLELSE

Demontering af kontrastskærmen

DISASSEMBLY

Removal of contrast screen



Pyntelisterne over og under kontrastskærmen løsnes ved at trykke listen ind (A) og samtidig trække ud i pilen B's retning. Listerne kan nu frigøres hele vejen rundt.

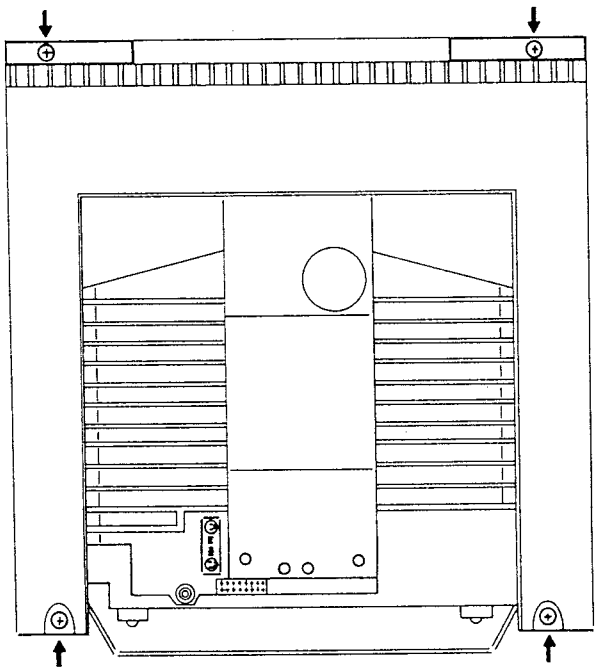
I hvert af de fire hjørner sidder en skrue som skrues ud, hvorefter kontrastskærmen er fri.

Loosen the upper and lower plastic strips by firmly pressing the strips in one side (A) and simultaneously pulling at the end of the strips in the direction of the arrow B. The strips are now loose and can be removed.

Loosen the screw in each of the four corners. The contrast screen can now be removed.

Bagpart

Rear part

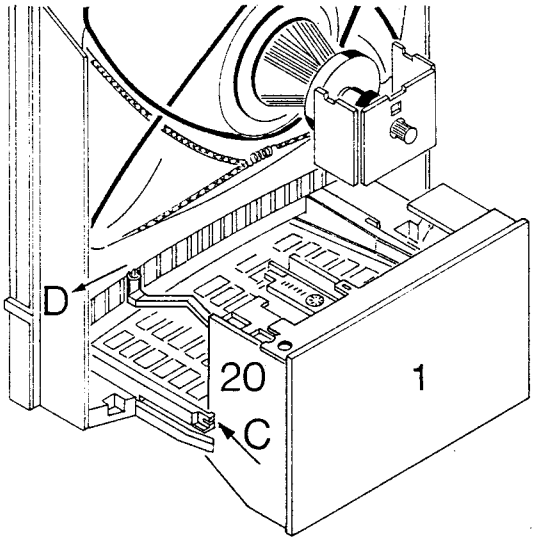


De fire skruer løsnes, og bagparten trækkes lige bagud.

Loosen the four screws and then remove the rear part by pulling straight outwards.

Serviceposition

Service position



Chassiset frigøres fra rammen i bunden ved at frigøre låsetappene C ved chassisets forreste kanter. Herefter kan chassiset trækkes bagud.

Chassiset sættes i serviceposition, ved at det trækkes fri og løftes op.

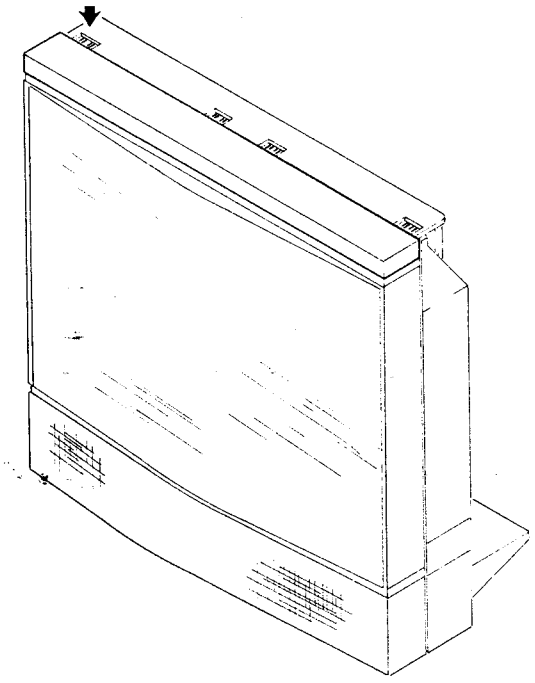
Ledningsbakken kan løsnes fra kabinettet, ved at trække denne i pilen D's retning.

To detach the chassis from the frame in the bottom of the set, release the two locks C at the front edges of the chassis. The chassis can now be pulled outwards.

Place the chassis in the service position by pulling it outwards and lifting it.

Detach the cable tray from the cabinet by pulling it in the direction of the arrow D.

Toppanel



Panelet løsnes i den ene side, ved at låsen aktiveres med en skruetrækker.

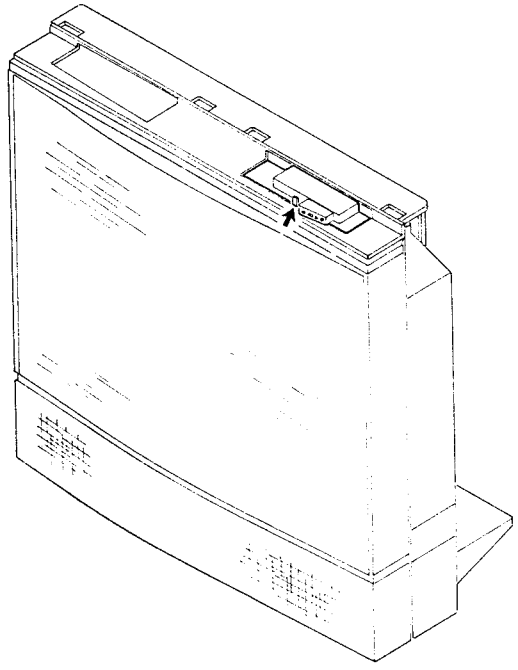
Toppanelet kan nu fjernes.

Top panel

Loosen the panel in one side by releasing the lock with a screwdriver.

The top panel can now be removed.

PCB 05 IR-modtager



Låsen løsnes med en skruetrækker, og PCB'en tages ud, ved at den løftes i den forreste kant.

NB! Ved demontering af IR-modtagerens hus skal IR-modtagerdioden loddes ud.

PCB 05 IR-receiver

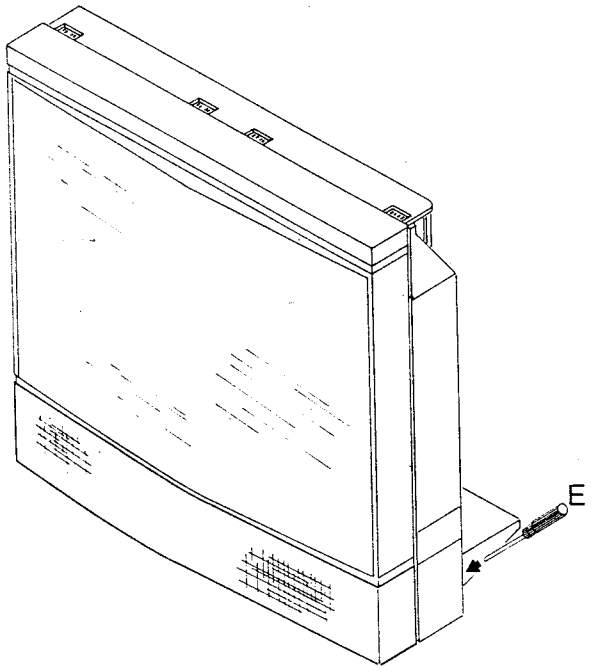
Release the lock with a screwdriver and remove the PCB by lifting it at its front.

Note! If the housing of the IR-receiver is to be removed, the IR-receiver diode must be desoldered.

Bang&Olufsen

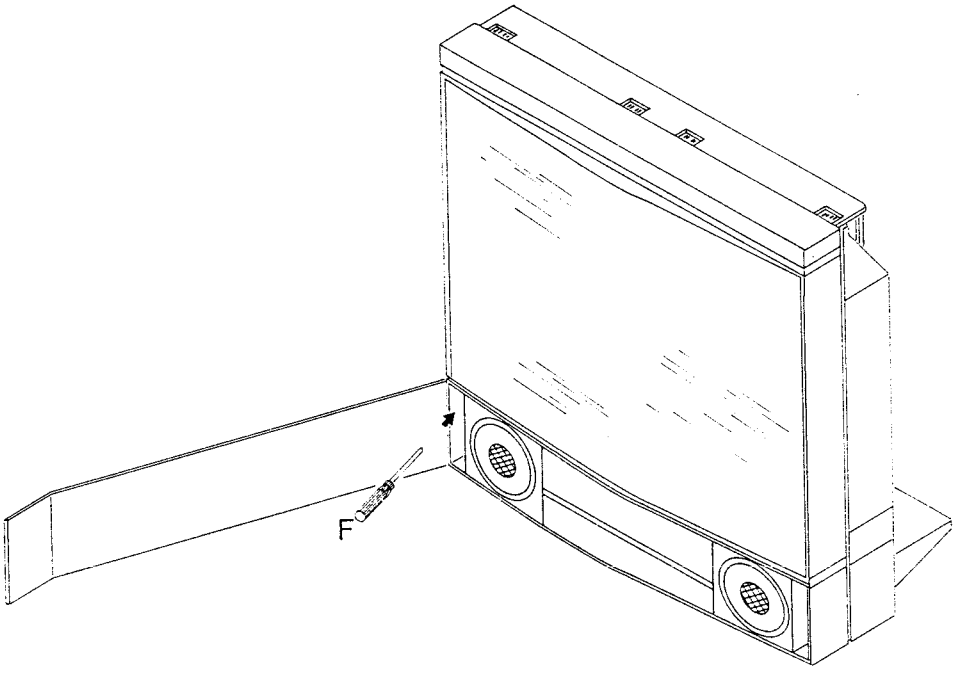
Højttalerpanel

Loudspeaker panel



Panelet frigøres i venstre side (set bagfra) ved at løsne låsene med en skruetrækker igennem hullerne i kabinettet (E). Herefter trækkes panelet fri langs kanten.

Loosen the panel in the left-hand side (seen from behind) by inserting a screwdriver into the holes in the cabinet (E) to release the locks. Loosen the panel at the front of the set.



Panelet frigøres i den anden side ved at løsne låsene forfra med en skruetrækker mellem panelet og kabinettet (F).

To detach the panel in the opposite side, release the locks by inserting a screwdriver between the panel and the cabinet (F).

SLUTAFPRØVNING

Denne afprøvning kan benyttes som kontrol, efter at reparationen er afsluttet.
NB! I apparater fra S/W version 2.0 er de mulige programnumre 1-32 i stedet for 0-31.

Tilslutninger

TV'et tilsluttes lysnettet og et antennesignal.

Nærbetjening

Hovedafbryderen aktiveres → Stand-by indikator lyser

(STEP) aktiveres → Starter på P1, hvis TV'et har været frakoblet netspændingen, og ellers på sidst benyttede program

Beolink 1000 fjernbetjening

Tænd

[TV] → Starter på sidst benyttede program

0-31 → Starter på valgte programnummer

Tune

Direkte frekvensvalg
Indstilling af ønsket frekvens, f.eks. 543MHz (kanal 30), på et programnummer ml. 0 og 31.
Omregningstabel for frekvens/kanal findes i betjeningsvejledningen (Frekvensoversigt).

[GO TO] → Grønt display
[5] [4] [3] → Gult display

Store

Den indstillede frekvens kan lægges i hukommelsen på et programnummer mellem 0 og 31.

[STORE] → Rødt display
[1] → Programnummer 1 vælges
[STORE] → Grønt display
[●] → Stand-by
[1] → Den på programnummer 1 lagrede frekvens vises

Tune

Søgning

Søgning under det valgte programnummer (0-31)

[<<] eller [>>] → Søgning stopper på nærmeste senderfrekvens

Finindstilling

Ønskede frekvens er fundet.
Billedet står ikke skarpt.

[GO TO] → Grønt display
[<<] eller [>>] → FT (fine tune) kan varieres op (+) eller ned (-)

FINAL TEST

This test may be used as a check-up after the repair has been carried out.
NOTE! In sets with S/W version from 2.0 the potential preset numbers are 1-32 instead of 0-31.

Connections

Connect the TV set to the mains supply and an aerial signal.

Direct Operation

Activate the mains switch → The stand-by indicator lights

Activate (STEP) → Starts on P1 if the TV set has been disconnected from the mains supply or else on the programme last seen

Beolink 1000 Remote Control

Switching On

[TV] → Starts on the programme last seen

0-31 → Starts on the preset No selected

Tuning

Direct frequency selection
Setting of a desired frequency, e.g. 543MHz (channel 30), on a preset No between 0 and 31.
Conversion tabel for frequency/channel, see owner's manual (List of frequencies).

[GO TO] → Green display
[5] [4] [3] → Yellow display

Store

The set frequency can be stored on a preset No between 0 and 31.

[STORE] → Red display
[1] → Selection of preset No 1
[SOUND] → Green display
[●] → Stand-by
[1] → The frequency stored on the selected preset No is shown

Tuning

Search

Search on the selected preset No (0-31)

[<<] or [>>] → The search stops at the closest transmitter frequency

Fine Tuning

The frequency desired has been found.
The picture is not sharp.

[GO TO] → Green display
[<<] or [>>] → FT (fine tuning) maybe varied up (+) or down (-)

Teletekst

Kun ved apparater med indbygget teletekst.

TEXT	→ Skifter til tekst-mode
Vælg en side, f.eks. 100	
GO TO 1 0 0	→ Tekstside 100 vises
STORE 2 STORE	→ Tekstside 100 lagres på hukommelsesside 2
◉	→ Stand-by
TEXT 2	→ Hukommelsesside 2, tekstside 100 vises

Billede

PICTURE	→ »BRILLIANCE xx«, grønt display
△ eller ▽	→ Lys varieres mellem 0 og 31
PICTURE	→ »COLOUR xx«, grønt display
△ eller ▽	→ Farvemætningen varieres mellem 0 og 60
PICTURE	→ »CONTRAST xx«, grønt display
△ eller ▽	→ Kontrast varieres mellem 0 og 31

Lyd

SOUND	→ »VOLUME xx«, grønt display
△ eller ▽	→ volume varieres mellem 0 og 40
SOUND	→ »BALANCE x«, grønt display
△ eller ▽	→ Balance varieres mellem 8 og -8
SOUND	→ »TREBLE x«, grønt display
△ eller ▽	→ Diskantniveauet varieres mellem 5 og -4
SOUND	→ »BASS x«, grønt display
△ eller ▽	→ Basniveauet varieres mellem 5 og -4
SOUND	→ »VOLUME HP xx«, grønt display
△ eller ▽	→ Volume i hovedtelefon varieres mellem 0 og 32

To sprog (System A2)

Ved modtagelse af to-sprogede udsendelser kan der vælges mellem sprog A og B.

TURN	→ Skifter mellem sprog A og sprog B. Indikeres af to røde pile i øverste højre hjørne (◄ = A, ► = B).

Teletext

Only applies to TV sets with built-in teletext.

TEXT	→ Switches into the text mode
Select a page, e.g. 100	
GO TO 1 0 0	→ Shows text page 100
STORE 2 STORE	→ Text page 100 is stored on memory page 2
◉	→ Stand-by
TEXT 2	→ Shows memory page 2, text page 100

Picture

PICTURE	→ "BRILLIANCE xx", green display
△ or ▽	→ Brilliance varies in the range from 0 to 31
PICTURE	→ "COLOUR xx", green display
△ or ▽	→ Colour saturation varies in the range from 0 to 60
PICTURE	→ "CONTRAST xx", green display
△ or ▽	→ Contrast varies in the range from 0 to 31

Sound

SOUND	→ "VOLUME xx", green display
△ or ▽	→ Volume level varies in the range from 0 to 40
SOUND	→ "BALANCE x", green display
△ or ▽	→ Balance level varies in the range from 8 to -8
SOUND	→ "TREBLE x", green display
△or ▽	→ Treble level varies in the range from 5 to -4
SOUND	→ "BASS x", green display
△ or ▽	→ Bass level varies in the range from 5 to -4
SOUND	→ "VOLUME HP xx", green display
△ or ▽	→ Volume level in head phones varies in the range from 0 to 32

Dual Languages (System A2)

When receiving dual language programmes, language A or B may be selected.

TURN	→ Switches between language A and language B. This is indicated by two red arrows in the upper righthand corner (◄ = A, ► = B)

Stereo lyd

Ved modtagelse af stereo-lyd skifter TV'et automatisk til stereo. Stereo indikeres af to røde pile i øverste højre hjørne.

TURN → Mono-lyd, røde pile slukket
TURN → Stereo-lyd, to røde pile i øverste højre hjørne

Ved skift til anden stereo-udsendelse vil TV'et automatisk skifte til stereo.

Shift funktioner

Tidskonstant

SHIFT 2 → Tidskonstanten ændres til en perfekt synkronisering mellem TV'et og en videobåndoptager (»toggle«-funktion). Indikeres med »A/V« efter programnummeret på skærmen

System B/System L/System M

SHIFT 3 → Systemskift (»toggle«-funktion)

Billede

Der foretages kontrol af geometri, højspænding, fokus, følsomhed, hvid balance, farvespring, opløsning, slæb, skygger, interferens og gråskala.

Stereo Sound

When receiving stereo sound, the TV set automatically switches to stereo. Stereo is indicated by two red arrows in the upper righthand corner.

TURN → Mono sound, no red arrows in the upper righthand corner
TURN → Stereo sound, two red arrows in the upper righthand corner

When switching to another stereo transmission, the TV-set automatically switches to stereo sound.

Shift Functions

Time constant

SHIFT 2 → The time constant is changed into a perfect synchronization between the TV set and a video recorder (toggle function). This is indicated by "A/V" after the preset No

System B/System L/System M

SHIFT 3 → Change of system (toggle function)

Picture

Check geometry, high voltage, focus, sensitivity, white balance, colour switching, resolution, ringing, ghosts, interference and grey scale.

ISOLATIONSTEST

Ethvert apparat skal isolationstestes, efter at det har været adskilt. Testen udføres, når apparatet er samlet igen og er klar til udlevering til kunden.

Der må ikke forekomme overslag under testen!

Isolationstesten udføres på følgende måde:

De to stikben på netstikket kortsluttes og tilsluttes den ene af terminalerne på isolationstesteren. Den anden terminal tilsluttes stelbenet i en af højttalerstikdåserne.

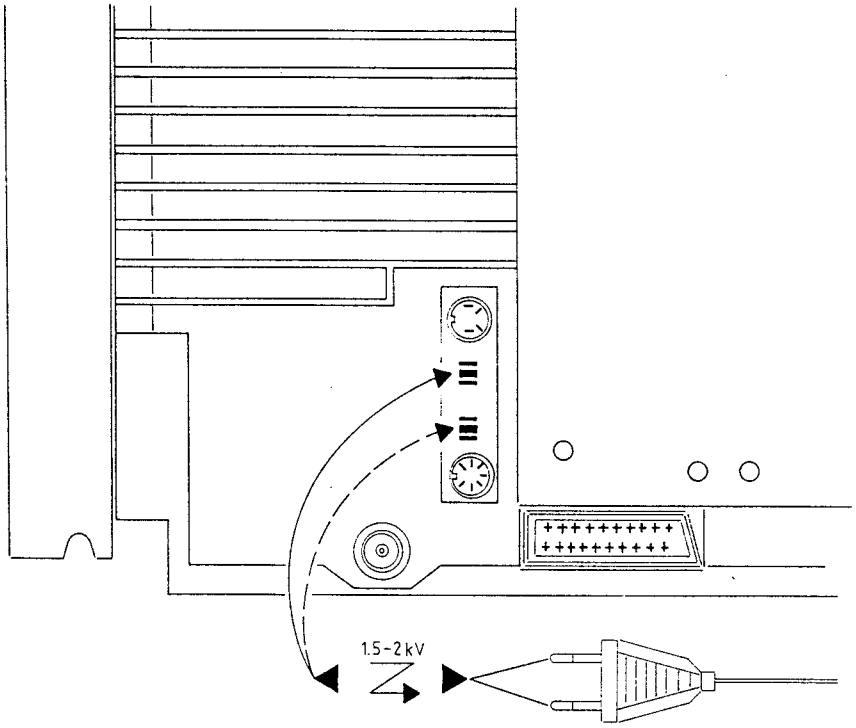
INSULATION TEST

Each set must be insulation tested after having been dismantled. Make the test when the set has been reassembled and is ready to be returned to the customer.

Flashovers must not occur during the testing procedure!

Make the insulation test as follows:

Short-circuit the two pins of the mains plug and connect them to one of the terminals of the insulation tester. Connect the other terminal to the chassis pin of one of the loudspeaker sockets.



OBS!

For at undgå beskadigelser af apparatet er det vigtigt, at begge terminaler på isolationstesteren har virkelig god kontakt.

Spændingsreguleringen på isolationstesteren drejes langsomt op, indtil en spænding på 1,5-2 kV er opnået. Her skal den holdes i ét sekund, hvorefter der langsomt drejes ned for spændingen igen.

NOTE!

To avoid damaging the set it is essential that both terminals of the insulation tester have good contact.

Slowly turn the voltage control of the insulation tester until a voltage of 1.5-2 kV is obtained. Maintain that voltage for one second, then slowly turn it down again.

Bang & Olufsen

Beovision MX 5000

Type 3211-3212-3213-3214-3216-
3217-3218

Bang & Olufsen

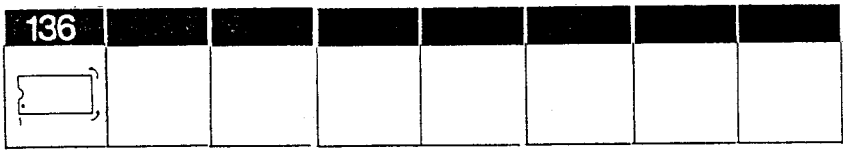
Beovision MX 5000 er identisk med Beovision MX 4500 undtaget fra flg. punkter:

Beovision MX 5000 is identical with Beovision MX 4500 except the following points:

Beovision MX 5000 ist mit Beovision MX 4500 identisch ausgenommen von den folgenden Punkter:

Beovision MX 5000 est identique à Beovision MX 4500 à l'exception des sujets suivants:

LIST OF ELECTRICAL PARTS



1IR01 Δ	8341156	**136** HD 404919 (16K)

Δ indicates that static electricity may destroy the component.

LIST OF MECHANICAL PARTS

(Exploded view see page 12-1)

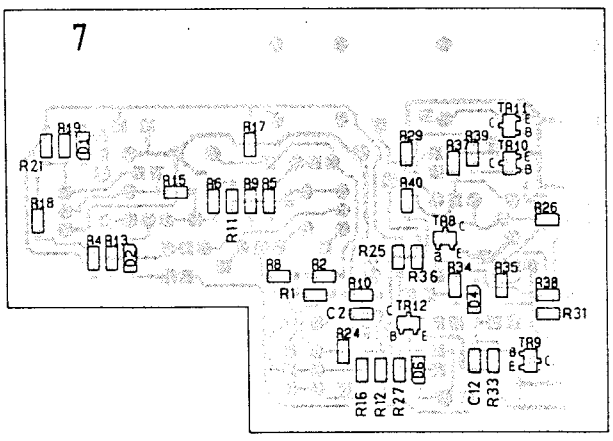
9010	3450710	Cap

3503538	Owner's manual, Danish
3503539	Owner's manual, Swedish
3503540	Owner's manual, Finnish
3503541	Owner's manual, English
3503542	Owner's manual, German
3503543	Owner's manual, Dutch
3503544	Owner's manual, French
3503545	Owner's manual, Italian
3503546	Owner's manual, Spanish

ACCESSORIES

8930806	MB 5000 – Motorized TV base
8930816	MS 5000 – Motorized TV stand

PCB 7, Sub module Teletext



Bang & Olufsen

NICAM 728

Type 3037 installation kit Pal B/G
for Beovision MX 3000/5000

Type 3040 installation kit Pal I
for Beovision MX 3000/5000

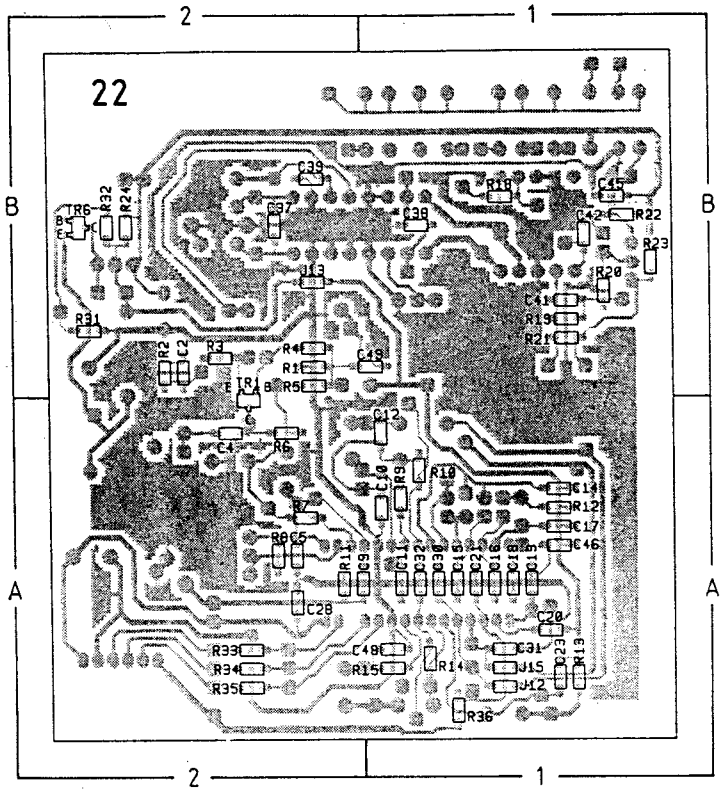
Type 3041 installation kit Pal B/G
for Beovision MX 3000/4500

Type 3042 installation kit Pal I
for Beovision MX 3000/4500

Beovision MX 3000, type 3142-3148

Beovision MX 5000, type 3212-3218

PCB 22, Demodulator



PCB 23, Nicam D/A Decoder

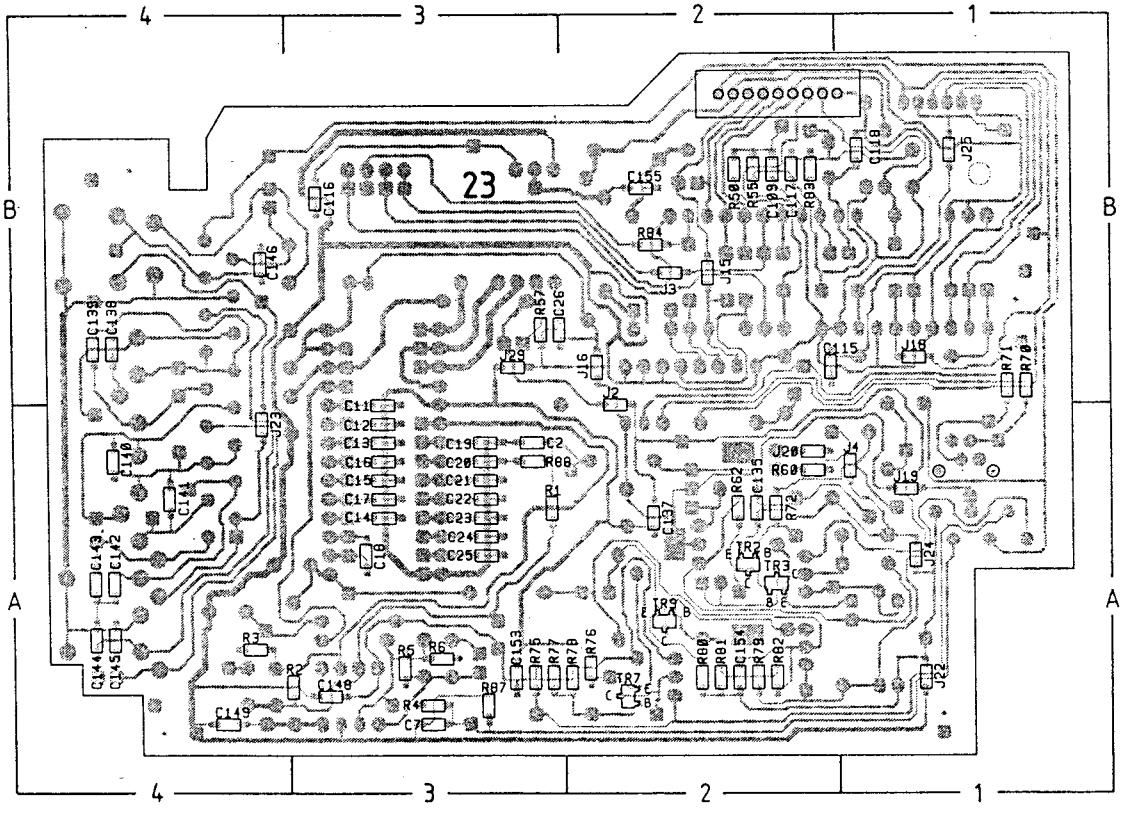


DIAGRAM D STEREO DECODER, SOUND CONTROLS, NICAM 728 DIGITAL SIGNAL PROCESSING

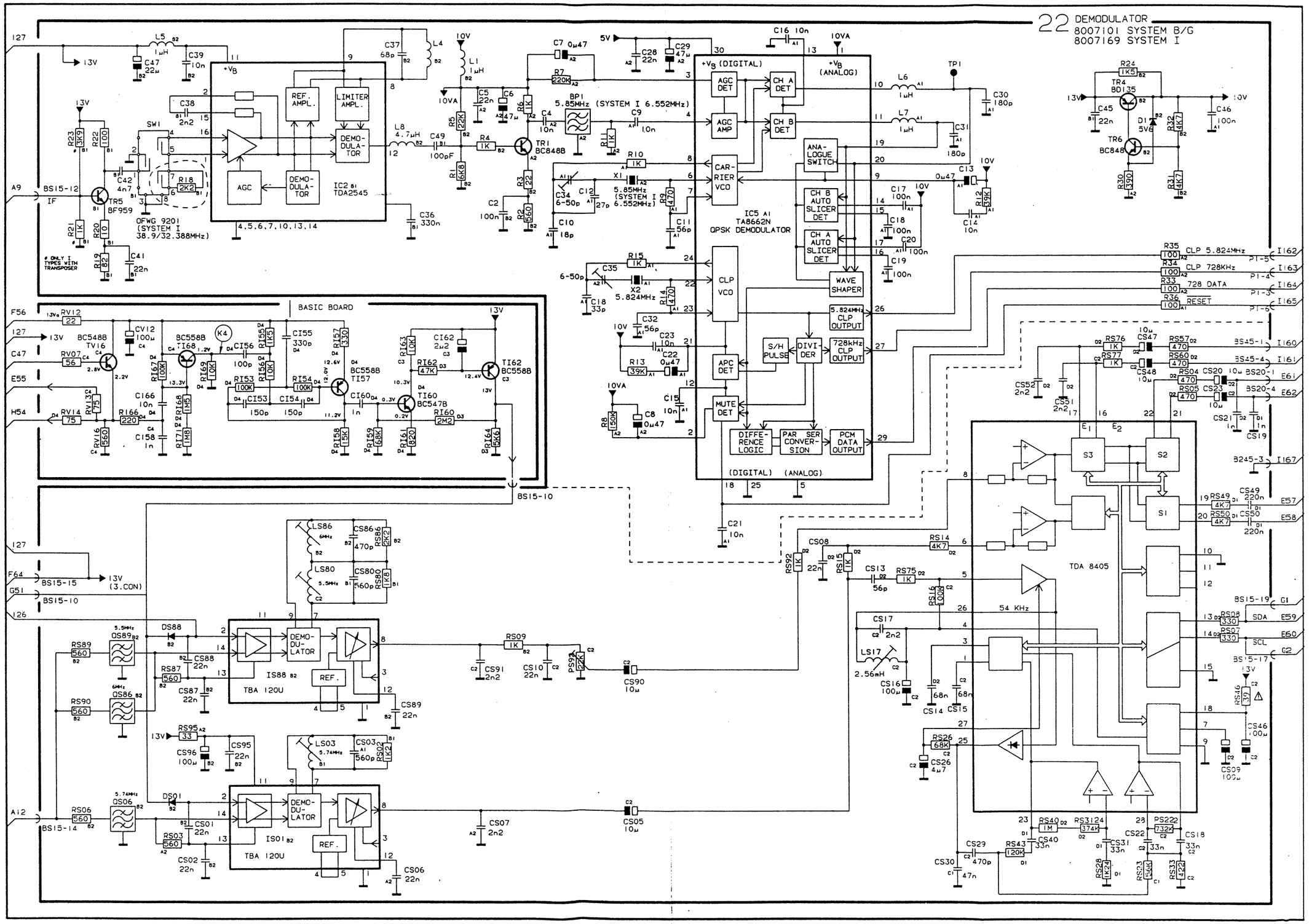


DIAGRAM E AF-AMPLIFIER, LINK INTERFACE, A/V CONNECTIONS

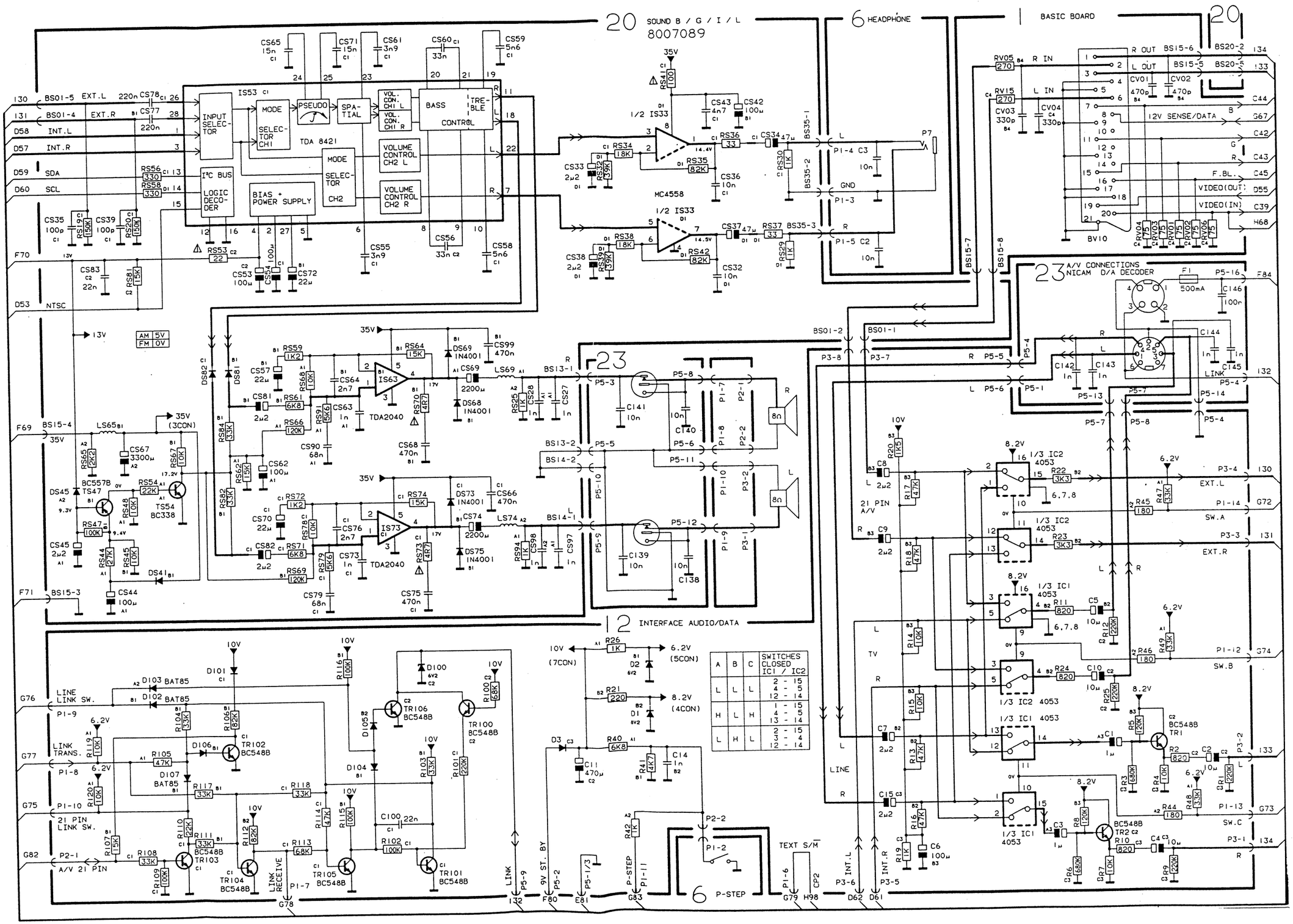
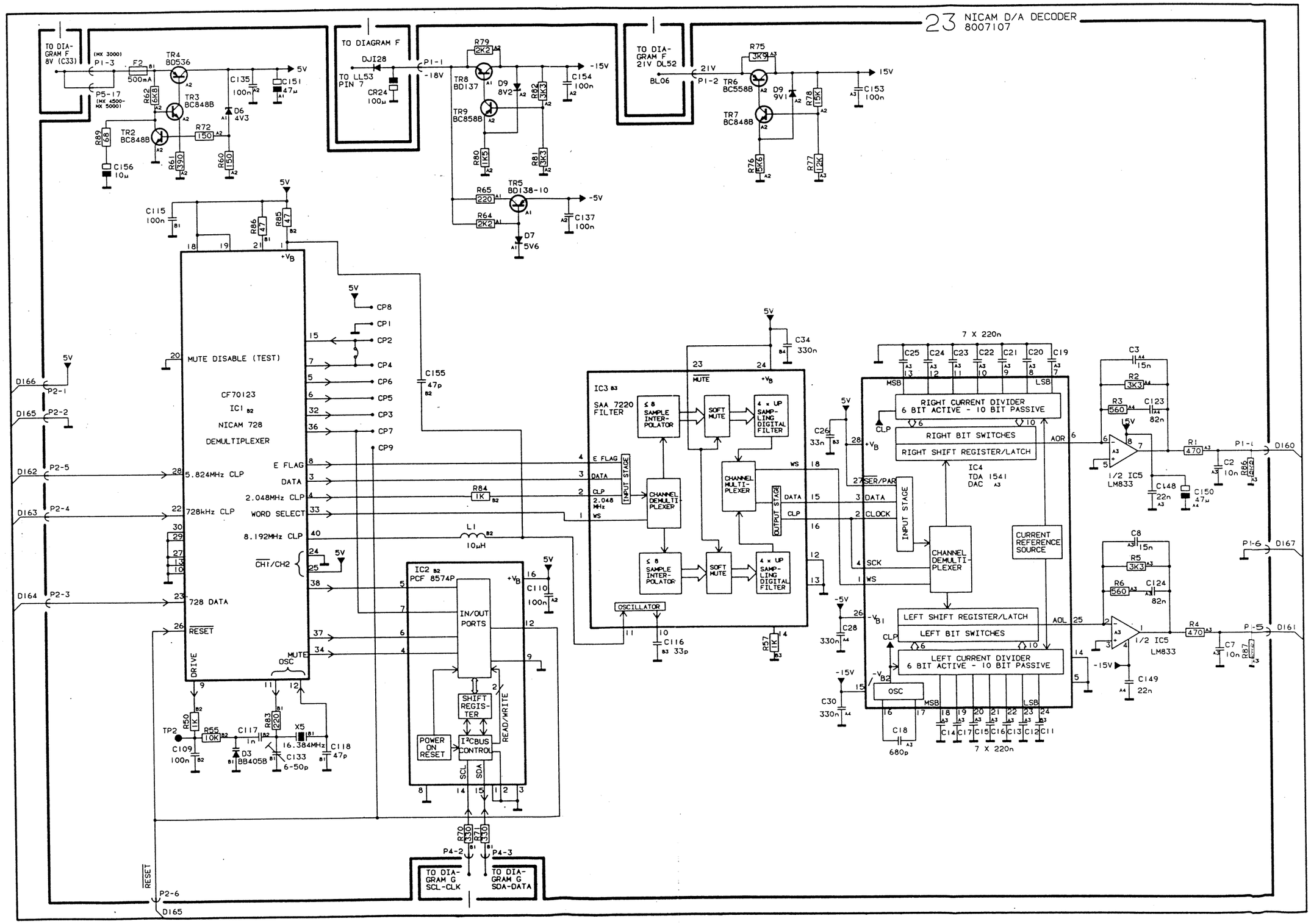
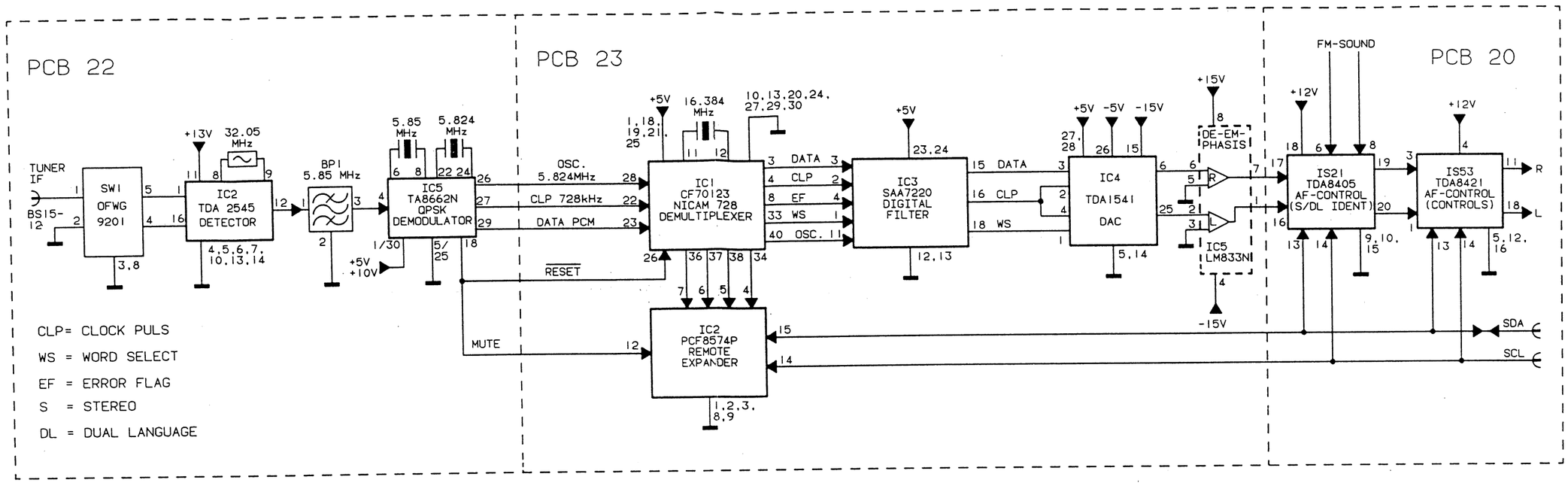


DIAGRAM I NICAM 728 DIGITAL FILTER, D/A CONVERTER



www.manualscenter.com

BLOCK DIAGRAM



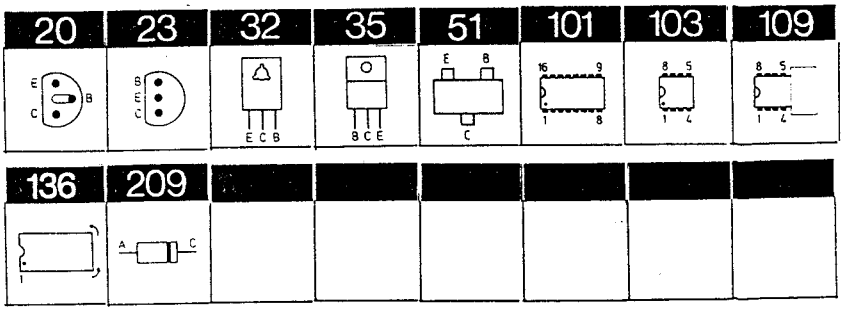
Standard Resitors:

Resistors SMD 2% 1/8 W
SMD 5% 1/8 W

	5%	2%	2%	2%	2%	2%	5%	5%
	x1	x10	x100	x1K	x10K	x100K	x1M	x10M
1.0	5011623	5011647	5011218	5011227	5011241	5011256	5011267	5011730
1.1	5011624	5011648	5011669	5011681	5011689	5011694	5011707	
1.2	5011625	5011649	5011219	5011682	5011490	5011257	5011708	
1.3	5011626	5011650	5011670	5011683	5011242	5011258	5011709	
1.5	5011627	5011651	5011220	5011228	5011243	5011259	5011710	
1.6	5011628	5011652	5011671	5011684	5011690	5011695	5011711	
1.8	5011629	5011653	5011672	5011229	5011244	5011260	5011712	
2.0	5011630	5011654	5011673	5011685	5011691	5011696	5011713	
2.2	5011216	5011655	5011674	5011230	5011245	5011261	5011714	
2.4	5011634	5011656	5011675	5011686	5011246	5011697	5011715	
2.7	5011635	5011657	5011497	5011231	5011247	5011262	5011716	
3.0	5011731	5011658	5011499	5011500	5011692	5011698	5011717	
3.3	5011217	5011659	5011676	5011232	5011248	5011263	5011718	
3.6	5011636	5011660	5011677	5011687	5011249	5011264	5011719	
3.9	5011637	5011661	5011221	5011233	5011491	5011699	5011720	
4.3	5011638	5011662	5011498	5011688	5011492	5011700	5011721	
4.7	5011639	5011269	5011222	5011234	5011250	5011265	5011722	
5.1	5011640	5011663	5011678	5011235	5011493	5011701	5011723	
5.6	5011641	5011664	5011223	5011236	5011251	5011702	5011724	
6.2	5011642	5011665	5011224	5011237	5011693	5011703	5011725	
6.8	5011643	5011666	5011225	5011238	5011252	5011704	5011726	
7.5	5011644	5011667	5011679	5011239	5011253	5011705	5011727	
8.2	5011645	5011270	5011226	5011240	5011254	5011266	5011728	
9.1	5011646	5011668	5011680	5011489	5011255	5011706	5011729	

(Glue dots, approx. 200, part no. 3181932).

LIST OF ELECTRICAL PARTS



Resistors not referred to are standard, see page 18-5

PCB 22, 8007101 Demodulator system B/G
8007169 Demodulator system I

IC1 Δ	8341099	136	TA 8662N				
IC2 Δ	8340496	101	TDA 2545A				
TR1	8320615	51	BC 848B	TR5	8320538	23	BF 959
TR4	8320785	32	BD 138-10	TR6	8320615	51	BC 848B
D1	8300296	209	ZPD 5.6V 2%				
R30	5010070		390 Ω 5% 1/4W				

C1	4000241	100 pF 5% 50V	C28	4010177 22 nF -20+80% 50V
C2	4010166	100 nF - 20+80% 50V	C29	4200516 47 µF 20% 16V
C4	4010176	10 nF -20+80% 50V	C30	4000282 180 pF 5% 50V
C5	4010177	22 nF -20+80% 50V	C31	4000282 180 pF 5% 50V
C6	4200516	47 µF 20% 16V	C32	4000240 56 pF 5% 50V
C7	4200523	0.47 µF 20% 50V	C34	4340028 6-50 pF 50V
C8	4200523	0.47 µF 20% 50V	C35	4340028 6-50 pF 50V
C9	4010176	10 nF -20+80% 50V	C36	4130236 330 nF 20% 63V
C10	4000276	18 pF 5% 50V	C37	4000280 68 pF 5% 50V
C11	4000240	56 pF 5% 50V	C38	4010170 2.2 nF 10% 50V
C12	4000278	27 pF 5% 50V	C39	4010176 10 nF -20+80% 50V
C13	4200523	0.47 µF 20% 50V	C41	4010177 22 nF -20+80% 50V
C14-16	4010176	10 nF -20+80% 50V	C42	4010173 4.7 nF 10% 50V
C17-20	4010166	100 nF - 20+80% 50V	C45	4010177 22 nF -20+80% 50V
C21	4010176	10 nF -20+80% 50V	C46	4010166 100 nF -20+80% 50V
C22	4200523	0.47 µF 20% 50V	C47	4200508 22 µF 20% 25V
C23	4010176	10 nF -20+80% 50V	C48	4000239 33 pF 5% 50V

L1	8020600	Coil 1 µH 10%	L6	8020747 Coil 1 mH 10%
L4	8020539	Coil 38.9 MHz	L7	8020747 Coil 1 mH 10%
L5	8020600	Coil 1 µH 10%	L8	8020551 Coil 4.7 µH 10%
BP1	8020734	Band pass filter 5.85 MHz		
SW1	8030162	OFW G9201		
X1	8090085	Crystal 5.85 MHz	X2	8090083 Crystal 5.824 MHz

PCB 23, 8007260 Nicam D/A Decoder

IC1 Δ	8341159	136	CF 70123	IC4 Δ	8341182	109	TDA 1541A
IC2 Δ	8341158	136	PCF 8574P	IC5	8340930	103	LM833N
IC3 Δ	8341183	136	SAA 7220P/B				

TR2	8320615	51	BC 848B	TR6	8320510	20	BC558B
TR3	8320615	51	BC 848B	TR7	8320615	51	BC848B
TR4*	8320438	35	BD 536	TR8	8320292	32	BD137
	3358242		Heat sink	TR9	8320616	51	BC858B
TR5	8320785	32	BD 138				

D3	8300402	209	BB 405B	D8	8300578	209	ZPD 9.1V 2%
D6	8300396	209	ZPD 4.3V 5%	D9	8300173	209	ZPD 8.2V 5%
D7	8300296	209	ZPD 5.6V 2%				

Δ indicates that static electricity may destroy the component.

* Specially selected or adapted sample.

R61	5011021	390 Ω 5% 1/2W	R85	5010411	47 Ω 5% 1/4W
R64	5010064	2.2 kΩ 5% 1/4W	R86	5010411	47 Ω 5% 1/4W
R65	5020460	220 Ω 5% 1W	R89	5011356	68 Ω 5% 1/8W

C2	4010157	10 nF 10% 50V	C123	4130266	82 nF 5% 63V
C3	4130315	15 nF 5% 63V	C124	4130266	82 nF 5% 63V
C7	4010157	10 nF 10% 50V	C133	4340028	6-50 pF 50V
C8	4130315	15 nF 5% 63V	C135	4010166	100 nF -20+80% 50V
C11-	4000287	220 nF -20+80% 25V	C137	4010166	100 nF -20÷80% 50V
C17			C138-	4010176	10 nF -20÷80% 50V
C18	4000326	680 pF 5% 50V	C141		
C19-	4000287	220 nF -20+80% 25V	C142-	4010132	1 nF 10% 50V
C25			C145		
C26	4010175	33 nF 10% 50V	C146	4010166	100 nF -20÷80% 50V
C28	4130236	330 nF 20% 63V	C148	4010177	22 nF -20÷80% 50V
C30	4130236	330 nF 20% 63V	C149	4010177	22 nF -20÷80% 50V
C34	4130236	330 nF 20% 63V	C150	4200688	47 µF 20% 50V
C109	4010166	100 nF -20+80% 50V	C151	4200617	47 µF 20% 10V
C110	4130230	100 nF 20% 63V	C153	4010166	100 nF -20÷80% 50V
C115	4010166	100 nF -20+80% 50V	C154	4010166	100 nF -20÷80% 50V
C116	4000361	33 pF 5% 50V	C155	4000293	47 pF 5% 50V
C117	4000345	1 nF 5% 50V	C156	4200510	10 µF 20% 16V
C118	4000234	47 pF 5% 50V			

L1	8020552	Coil 10 µH 10%

F1	6600090	Fuse 500 mAT 250V
F2	6600090	Fuse 500 mAT 250V

X5	8090082	Crystal 16.384 MHz

P1	7220428	Plug 6/6 pole
P2	7220470	Plug 6 pole
P4	7220779	Plug 4 pole
P5	7220436	Plug 17/17 pole
P6	3168754	Link panel

PCB 1, Basic Board

DJI	8300518	BA 157

CR24	4200917	100 µF -20+50% 40V

Parts not shown

Type 3037-3040

3152559	Holder f/PCB 12
3390382	Bag w/parts
3543115	Mounting instructions
3503537	Owner's manual

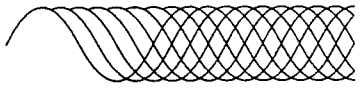
Type 3041-3042

3152559	Holder f/PCB 12
3390383	Bag w/parts
8341156	IC f/1IR01 - HD 404919
3543117	Instruction f/1IR01
3543114	Mounting instruction
3503537	Owner's manual

JUSTERINGER
Vigtigt! Der må ikke justeres i filteret BP 1.

Ved alle justeringer skal apparatet tilføres et NICAM stereo antennesignal.

Carrier VCO
Tilslut et oscilloskop til ben 20 på 22IC5, QPSK-Demodulator (TP1).



Med C 34 justeres, indtil øjemønster-signalet er støjfrit og stabilt.

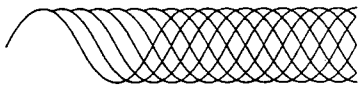
Clock-VCO
Drej C 35 med uret, indtil stereolyden forsvinder, (stereo-indikatorerne i øverste højre hjørne af TV'et slukker). Drej derefter C 35 mod uret, indtil stereolyden forsvinder. Drej nu C 35 til midt imellem de to punkter.

OSC
Indstil oscilloskopet til DC, og tilslut det mellem R50 og R55 (TP2).
Juster C 133, indtil spændingen står stabilt på 1,5 V DC.

ADJUSTMENTS
Note! Do not adjust in the filter BP 1.

During all adjustments, the TV-set must be fed a NICAM stereo antenna signal.

Carrier VCO
Connect an oscilloscope to pin 20 of 22IC5, QPSK-Demodulator (TP1).



Adjust C 34, until the eye pattern signal is noiseless and stable.

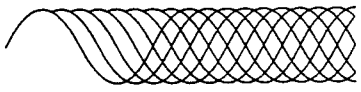
Clock VCO
Turn C 35 clockwise until the stereo sound disappears (the stereo indicators in the upper right-hand corner of the TV-set switches off). Now turn C 35 counter-clockwise until the stereo sound disappears. Finally turn C 35 until mid-position between the two positions.

OSC
Set the oscilloscope to DC and connect it between R50 and R55 (TP2).
Adjust C133 until the voltage is stable at 1.5 V DC.

JUSTIERUNGEN
Wichtig! Keine Justierungen am Filter BP 1 vornehmen.

Bei sämtlichen Einstellvorgängen muß dem Gerät ein NICAM-Stereo-Antennensignal zugeführt werden.

Spannungsgeregelter Träger-Oszillator
Einen Oszillographen an Anschluß 20 des 22IC5, QPSK-Demodulator (TP1) anschließen.



Mit C 34 solange justieren, bis das Augenmuster-Signal rauschlos und stabil ist.

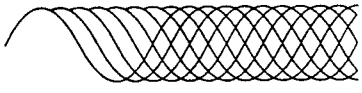
Spannungsgeregelter Clock-Oszillator
C 35 im Uhrzeigersinn drehen, bis der Stereo-Ton verschwindet (die Stereo-Anzeigelämpchen in der oberen, rechten Ecke des Fernsehgerätes erlöschen). Anschließend C 35 entgegen dem Uhrzeigersinn drehen, bis der Stereo-Ton verschwindet. Jetzt C 35 auf eine Position zwischen den beiden Punkten einstellen.

OSC
Den Oszillographen auf Gleichstrom einstellen und zwischen R50 und R55 (TP2) anschließen. C 133 solange verstellen, bis die Spannung bei 1,5 V Gleichstrom stabil ist.

REGLAGES
Attention! Il est interdit de régler le filtre BP 1.

Pour tous les réglages, appliquer à l'appareil un signal stéréo d'antenne NICAM.

Carrier VCO
Raccorder un oscilloscope à la bobine 20 de 22IC5, QPSK-Demodulateur (TP1).



A l'aide de C 34, régler jusqu'à ce que le signal rappelant un oeil soit stable et exempt de parasite.

Clock VCO
Tourner le condensateur C 35 dans le sens horaire jusqu'à évanouissement du son stéréo (les indicateurs stéréo dans le coin supérieur droit du téléviseur s'éteignent). Tourner ensuite C 35 dans le sens antihoraire jusqu'à évanouissement du son stéréo. Amener alors le condensateur C 35 à mi-chemin entre ces deux points.

OSC
Régler l'oscilloscope sur cc et le raccorder entre R50 et R55 (TP2).
Régler C 133 jusqu'à obtenir une tension stable de 1,5 V cc.

www.manualscenter.com

Bang&Olufsen

Motorized Base 5000

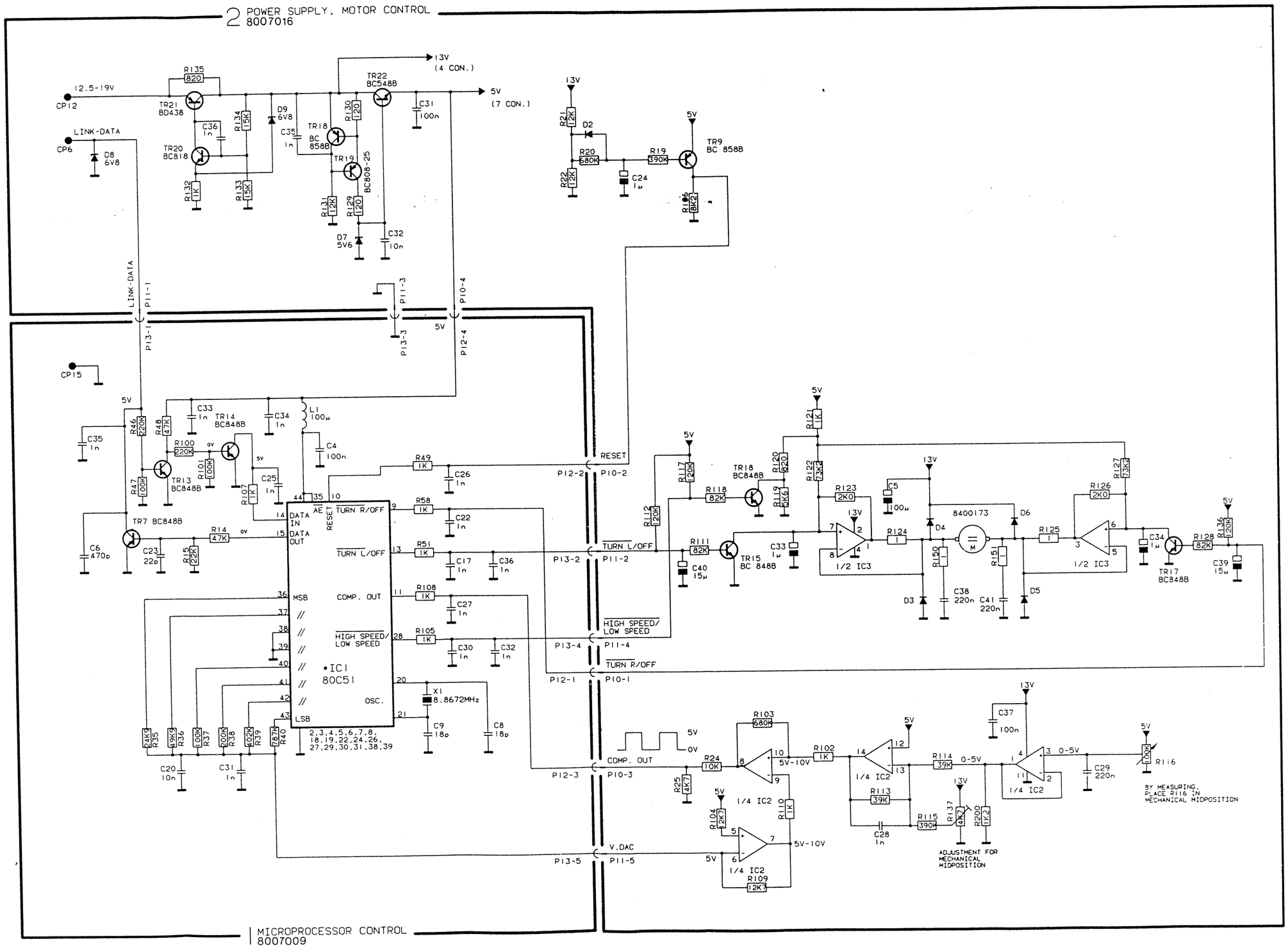
Type 3080

Motorized Stand 5000

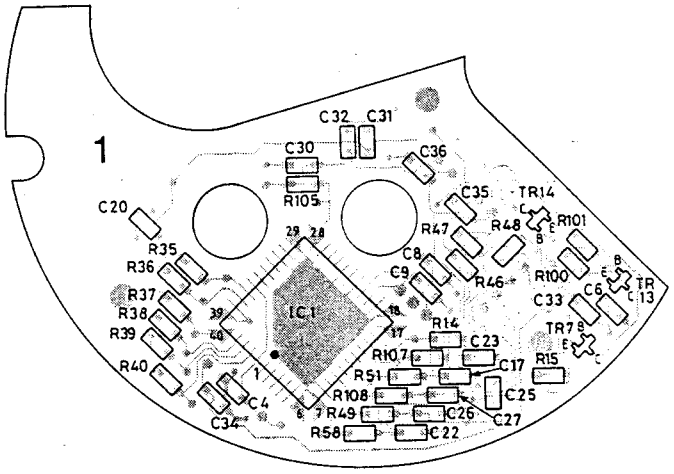
Type 3081

TECHNICAL SPECIFICATIONS	
Motorized Base, MB 5000	Type No. 3080
Placement	Table-top
Motorized Stand, MS 5000	Type No. 3081
Placement	Floor stand
Designed for	Beovision MX 5000
Remote operation	Beolink 1000
Turning angle	± 35 degree from center position
Time for turning	6 sec. from center to 35 degree
TV Stand by	Automatic return to center position
Memory MX 5000	At start TV, automatic turn to last used position
Connections	4-pin DIN cable to MX 5000
Power supply	12 volts from MX 5000
Power consumption	2.4 watts
Finish	Black
Dimensions WxHxD/Weight	MB 5000: 45x6x36 cm/3.5 kg
	MS 5000:
Accessories in price:	Cover system for cables

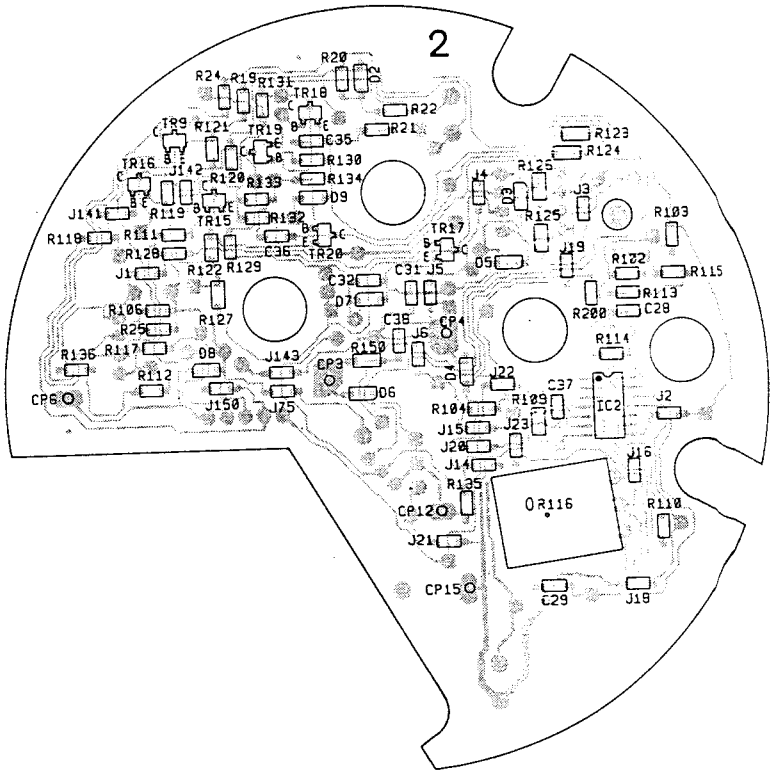
Subject to change without notice


2 POWER SUPPLY, MOTOR CONTROL
8007016
12.5-19V
CP12
LINK-DATA
CP6
D8 6V8
TR21 BD438
TR20 BC818
R135 820
R134 15K
R133 15K
R132 1K
C36 1n
D9 6V8
C35 1n
TR18 BC 858B
TR19 BC808-25
R130 120
R131 12K
R129 120
D7 5V6
C32 10n
C31 100n
TR22 BC548B
13V (4 CON.)
5V (7 CON.)
13V
R21 12K
D2
R20 680K
R22 12K
C24 1µ
R19 390K
TR9 BC 858B
R196 8K2
5V
LINK-DATA
P11-1
P13-1
P11-3
P13-3
P10-4
P12-4
CP15
5V
C35 1n
R46 220K
R48 47K
C33 1n
TR14 BC848B
C34 1n
L1 100µ
C4 100n
R100 220K
R101 100K
TR13 BC848B
R107 1K
C25 1n
R47 100K
TR7 BC848B
R14 47K
C23 22p
R15 22K
C6 470p
R49 1K
C26 1n
R58 1K
C22 1n
R51 1K
C17 1n
C36 1n
R108 1K
C27 1n
R105 1K
C30 1n
C32 1n
RESET
P12-2
P10-2
TURN L/OFF
P13-2
P11-2
HIGH SPEED/ LOW SPEED
P13-4
P11-4
TURN R/OFF
P12-1
P10-1
V.DAC
P13-5
P11-5
COMP. OUT
P12-3
P10-3
DATA IN
DATA OUT
TURN R/OFF
TURN L/OFF
COMP. OUT
HIGH SPEED/ LOW SPEED
MSB
LSB
OSC.
•IC1 80C51
X1 8.8672MHz
C9 18p
C8 18p
2.3.4.5.6.7.8. 18.19.22.24.26. 27.29.30.31.38.39
R24K3 R35
R49K3 R36
R100K R37
R200K R38
R102K R39
R787K R40
C20 10n
C31 1n
R112 20M
R117 20M
TR18 BC848B
R118 82K
R111 82K
TR15 BC 848B
C40 15µ
C33 1µ
R120 620
R119 5K6
R122 73K2
R123 2K0
C5 100µ
8400173
D4
D6
D3
D5
C38 220n
C41 220n
R124 1
R150 1
R151 1
R125 1
R126 2K0
R127 73K2
1/2 IC3
C34 1µ
TR17 BC848B
R128 82K
R136 120K
C39 15µ
R12 1K
R103 680K
R24 10K
R25 4K7
R102 1K
R104 2K7
R110 1K
R109 12K7
1/4 IC2
5V-10V
R114 39K
R113 39K
C28 1n
R115 390K
R137 4K7
R200 1K2
ADJUSTMENT FOR MECHANICAL MIDPOSITION
C37 100n
0-5V
C29 220n
R116 10K
BY MEASURING, PLACE R116 IN MECHANICAL MIDPOSITION
MICROPROCESSOR CONTROL
8007009

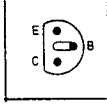
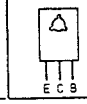
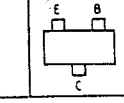
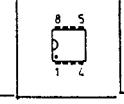
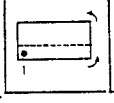
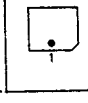
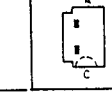
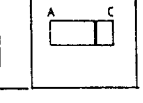
PCB 1, Control



PCB 2, Power Supply
Motor Control



LIST OF ELECTRICAL PARTS

20	32	51	103	138	144	224	250
							

Resistors not referred to are standard, see page 19-5

0R116 5300131 Potentiometer

PCB 1, 8007009 Control

IC1* Δ 8341100 144 µP 80C51

TR7	8320615	51	BC 848B
TR13	8320615	51	BC 848B
TR14	8320615	51	BC 848B

R35	5011598	24.9 kΩ 1% 1/8W	R38	5011601	200 kΩ 1% 1/8W
R36	5011599	49.9 kΩ 1% 1/8W	R39	5011602	402 kΩ 1% 1/8W
R37	5011600	100 kΩ 1% 1/8W	R40	5011603	787 kΩ 1% 1/8W

C4	4010166	100 nF -20+80% 50V	C22	4010132	1 nF 10% 50V
C6	4000286	470 pF 5% 50V	C23	4000277	22 pF 5% 50V
C8	4000276	18 pF 5% 50V	C25-C27	4010132	1 nF 10% 50V
C9	4000276	18 pF 5% 50V			
C17	4010132	1 nF 10% 50V	C30-C36	4010132	1 nF 10% 50V
C20	4010176	10 nF -20+80% 50V			

L1 8020621 Coil 100 µH

X1 8090005 Crystal 8.8672 MHz

P12	7210775	Socket 4/4 pole
P13	7210776	Socket 5/5 pole

PCB 2, 8007016 Power Supply, Motor Control

IC2	8341041	138	LM 324M
IC3	8341352	103	L 272M

TR9	8320616	51	BC 858B	TR19	8320609	51	BC 808-25
TR15-TR17	8320615	51	BC 848B	TR20	8320757	51	BC 818-40
				TR21	8320428	32	BD 438
TR18	8320616	51	BC 858B	TR22	8320108	20	BC 548B

D2-D6	8300482	250	LL 4148
D7	8300562	250	Z5.6V 2%
D8	8300520	224	Z6.8V 5%
D9	8300520	224	Z6.8V 5%

R104	5011761	12.7 kΩ 1% 1/4W	R125	5011755	1 Ω 2% 1/4W
R109	5011761	12.7 kΩ 1% 1/4W	R126	5011763	2.0 kΩ 1% 1/4W
R122	5011762	73.2 kΩ 1% 1/4W	R127	5011762	73.2 kΩ 1% 1/4W
R123	5011763	2.0 kΩ 1% 1/4W	R137	5370324	4.7 kΩ 20% 0.1W
R124	5011755	1 Ω 2% 1/4W	R150	5011755	1 Ω 2% 1/4W

Δ indicates that static electricity may destroy the component.

*Specially selected or adapted sample.

C5	4200403	100 µF -10+100% 25V	C34	4200333	1 µF -10+50% 63V
C24	4200512	1 µF 20% 50V	C35	4010132	1 nF 10% 50V
C28	4010132	1 nF 10% 50V	C36	4010132	1 nF 10% 50V
C29	4000287	220 nF -20+80% 25V	C37	4010166	100 nF -20+80% 50V
C31	4010166	100 nF -20+80% 50V	C38	4000287	220 nF -20+80% 25V
C32	4010176	10 nF -20+80% 50V	C39	4200521	15 µF 20% 16V
C33	4200333	1 µF -10+50% 63V	C40	4200521	15 µF 20% 16V

P10	7220376	Plug 4/4 pole
P11	7220546	Plug 5/5 pole

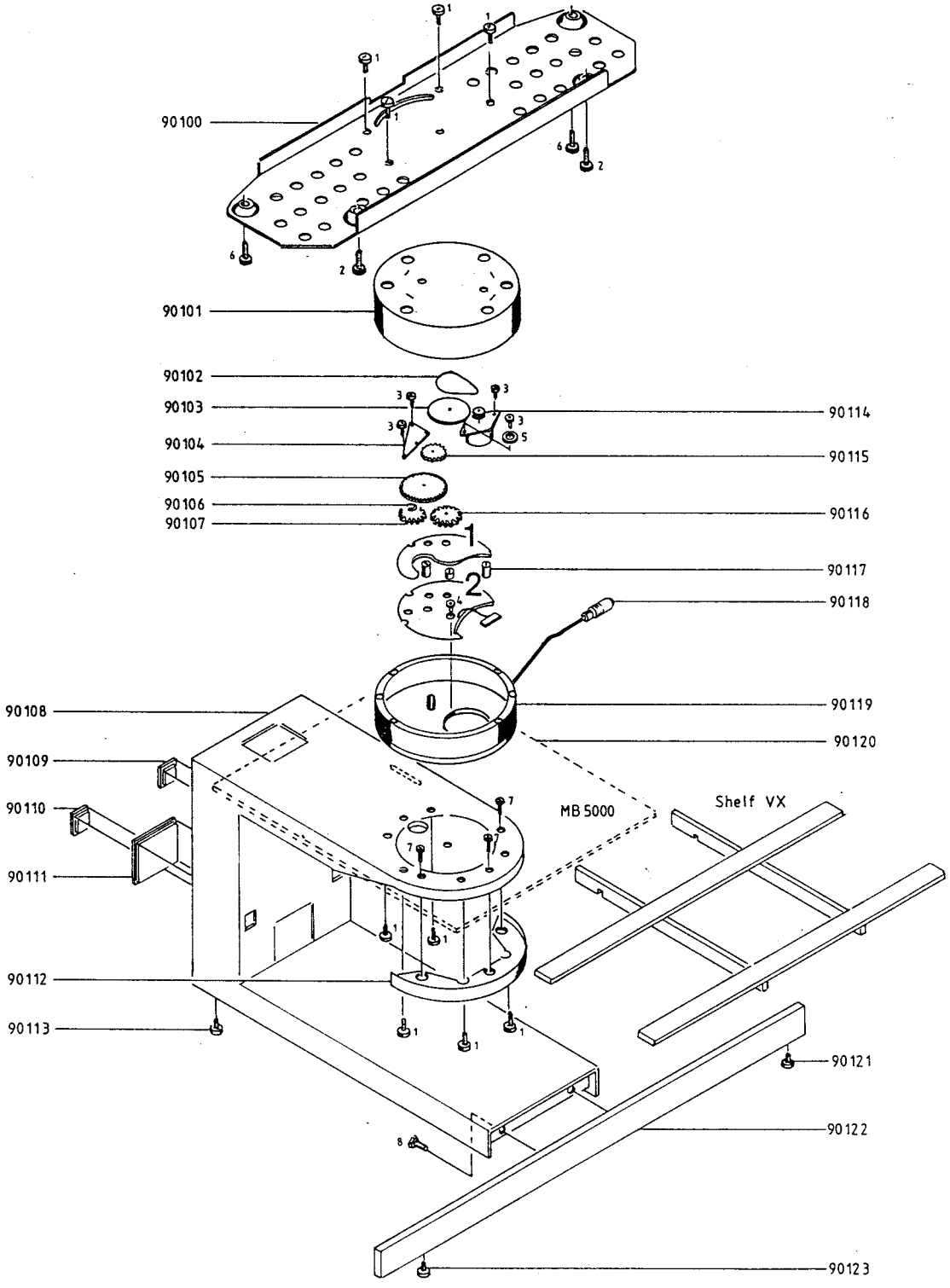
Standard Resistors:

Resistors SMD 2% 1/8 W
SMD 5% 1/8 W

	5%	2%	2%	2%	2%	2%	5%	5%
	x1	x10	x100	x1K	x10K	x100K	x1M	x10M
1.0	5011623	5011647	5011218	5011227	5011241	5011256	5011267	5011730
1.1	5011624	5011648	5011669	5011681	5011689	5011694	5011707	
1.2	5011625	5011649	5011219	5011682	5011490	5011257	5011708	
1.3	5011626	5011650	5011670	5011683	5011242	5011258	5011709	
1.5	5011627	5011651	5011220	5011228	5011243	5011259	5011710	
1.6	5011628	5011652	5011671	5011684	5011690	5011695	5011711	
1.8	5011629	5011653	5011672	5011229	5011244	5011260	5011712	
2.0	5011630	5011654	5011673	5011685	5011691	5011696	5011713	
2.2	5011216	5011655	5011674	5011230	5011245	5011261	5011714	
2.4	5011634	5011656	5011675	5011686	5011246	5011697	5011715	
2.7	5011635	5011657	5011497	5011231	5011247	5011262	5011716	
3.0	5011731	5011658	5011499	5011500	5011692	5011698	5011717	
3.3	5011217	5011659	5011676	5011232	5011248	5011263	5011718	
3.6	5011636	5011660	5011677	5011687	5011249	5011264	5011719	
3.9	5011637	5011661	5011221	5011233	5011491	5011699	5011720	
4.3	5011638	5011662	5011498	5011688	5011492	5011700	5011721	
4.7	5011639	5011269	5011222	5011234	5011250	5011265	5011722	
5.1	5011640	5011663	5011678	5011235	5011493	5011701	5011723	
5.6	5011641	5011664	5011223	5011236	5011251	5011702	5011724	
6.2	5011642	5011665	5011224	5011237	5011693	5011703	5011725	
6.8	5011643	5011666	5011225	5011238	5011252	5011704	5011726	
7.5	5011644	5011667	5011679	5011239	5011253	5011705	5011727	
8.2	5011645	5011270	5011226	5011240	5011254	5011266	5011728	
9.1	5011646	5011668	5011680	5011489	5011255	5011706	5011729	

(Glue dots, approx. 200, part no. 3181932).

LIST OF MECHANICAL PARTS



MS 5000
MB 5000

01Modul	8007009	PCB 1, Control
02Modul	8007016	PCB 2, Power Supply, Motor Control

90100	3124117	Mounting plate
90101	3164733	Cover
90102	2732085	Rubber belt
90103	2724080	Belt pulley
90104	3014084	Guide plate
90105	2700091	Gear wheel, complete
90106	2390002	Safety washer
90107	2700075	Gear wheel
90108	3100036	Frame
90109	3341072	Cover, square
90110	3341072	Cover, square
90111	3341071	Cover, square
90112	3164735	Cover, round
90113	3035055	Rubber foot
90114	8400173	Motor
90115	2700072	Gear wheel
90116	2700076	Gear wheel
90117	3152645	Spacer
90118	6270400	Wire 4 pole DIN
90119	3150071	Bearing housing
90120	2752024	Plate f/MB 5000
90121	3035055	Rubber foot
90122	3450721	Rail
90123	3035055	Rubber foot

Survey of screws and washers

1	2044035	Screw M5 x 10mm
2	2021011	Screw 5 x 15mm
3	2011037	Screw 2.5 x 10mm
4	2013121	Screw 3 x 14mm
5	2524032	Washer
6	2044055	Screw M5 x 16mm
7	2011039	Screw 2.5 x 10mm
8	2046030	Screw M6 x 12mm
9	2044032	Screw M5 x 10mm f/MB 5000

Parts not shown

MB 5000

3390345	Bag w/screws etc.
3911113	Cable sleeve
3503534	Installation guide
3390210	Bag
3397673	Foam packing
3392055	Carton

MS 5000

3390349	Bag w/screws etc.
3911113	Cable sleeve
3503535	Installation guide
3397689	Foam insert
3397675	Foam packing
3392062	Carton

Shelf VX 8930776

Not included in MS 5000

VIGTIGT!
BUNDSKRUERNE MÅ IKKE TAGES AF, TAG PLASTLÅGET AF VED SERVICERING

Kontrol/justering af drejebord

Samling af drejebord

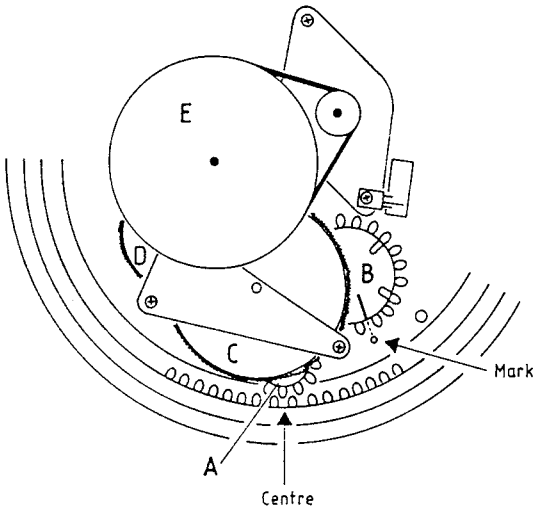
- Træk ledning med DIN-stik gennem hullet i bunden.
- Saml 'motor control' PCB02 og microprocessor PCB01 med de tre plasttappe og skru dem fast i bunden af lejeenheden.
- Monter tandhjul A.
  Tandhjulet skal stå i midten af tandkransen (8 takker til hver side). Fastgør tandhjulet med en låseskive.
- Monter tandhjul B på potentiometeret.
  Drej markeringen på dette hjul, så det passer med markeringen på printet (1 mm hul).
- Læg tandhjul C ned så det går i indgreb med de to første tandhjul.
- Læg tandhjul D ned så det går i indgreb med tandhjul C.
- Monter motor og transistor.
- Sæt den trekantede metalplade på.
  Markeringen på potentiometeret må ikke have flyttet sig fra markeringen på printet, og tandhjulet A skal stadig stå midt på tandkransen.
- Monter tandhjul E så det går i indgreb med tandhjul D.
- Monter remmen.

IMPORTANT!
DO NOT REMOVE BOTTOM SCREWS, REMOVE PLASTIC COVER WHEN SERVICING

Control/Adjustment of Motorized Stand

Assembly of Motorized Stand

- Draw wire with DIN plug through hole in bottom.
- Assemble »motor control« PCB02 and microprocessor PCB01 with the three plastic studs and screw them to the base of the bearing unit.
- Assemble cogwheel A.
  Cogwheel A must be in the centre of the rim (8 cogs on each side). Fix the cogwheel with a lock washer.
- Assemble cogwheel B on the potentiometer.
  Turn the mark on cogwheel B until it fits the mark on the printed circuit board (1 mm hole).
- Lower cogwheel C so it meshes with the first two cogwheels.
- Lower cogwheel D so it meshes with cogwheel C.
- Assemble the motor and the transistor.
- Fit the triangular metal plate. The mark on the potentiometer must still fit the mark on the printed circuit board, and cogwheel A must still be in the centre of the rim.
- Fit cogwheel E so it meshes with cogwheel D.
- Fit the belt.



Drejebordet er nu klar til justering/kontrol

- Slut drejebordet til en modtager.
- Drej drejebordet ca. 20° til den ene side: [PICTURE] [>]
- Gem positionen: [STORE] [PICTURE] [STORE]
- Sluk modtageren: [●]

Drejebordet skal nu returnere, så markeringen på tandhjulet passer med markeringen på printet.

Hvis ikke markeringen passer, skal drejebordet justeres med trimmepotentiometeret, som kan nås fra den modsatte side.

- Tænd modtageren.
- Sluk når den gemte position er opnået.

Fortsæt indtil justeringen passer.

- Monter plastlåget.

The motorized stand is now ready for adjustment/control

- Connect the stand to a receiver.
- Turn the stand approx. 20° to one side: [PICTURE] [>]
- Save the position: [STORE] [PICTURE] [STORE]
- Turn off the receiver: [●]

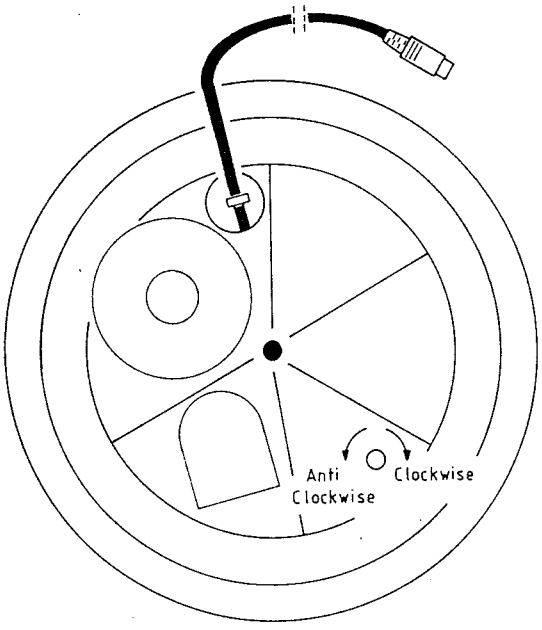
The motorized stand should now return so the mark on the cogwheel fits the mark on the printed circuit board.

If the marks do not fit, then the motorized stand must be adjusted using the trimpotentiometer, which can be reaced from the opposite side.

- Turn on the receiver.
- Turn off when the saved position has been reached.

Continue until the adjustment fits.

- Fit the plastic cover.



WICHTIG!
DIE UNTEREN SCHRAUBEN NICHT ENTFERNEN, BEI WARTUNGEN DEN KUNSTSTOFFDECKEL ABNEHMEN

Überprüfung/Justierung des motorisiertes Fußgestells

Zusammenbau des Fußgestells

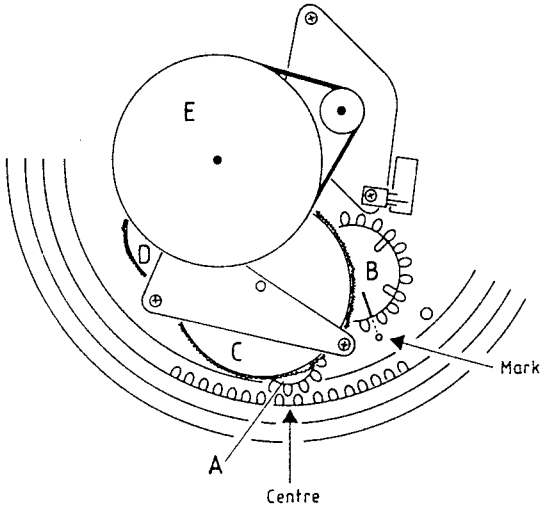
- Eine Leitung mit einem DIN-Stecker durch das Loch am Boden hindurchziehen.
- »motor control« PCB02 sowie den Mikroprozessor PCB01 mit den drei Kunststoffzapfen montieren und am Boden der Lagereinheit festschrauben.
- Zahnrad A montieren.
  Das Zahnrad muß sich in der Mitte des Zahnkranzes befinden (8 Zähne an jeder Seite). Das Zahnrad mit Hilfe einer Arretierscheibe befestigen.
- Zahnrad B an das Potentiometer montieren.
  Die Kennzeichnung an diesem Rad so drehen, daß sie mit der Kennzeichnung auf der Printplatte (1 mm Loch) übereinstimmt.
- Zahnrad C so anbringen, daß es mit den beiden ersten Zahnrädern in Eingriff kommt.
- Zahnrad D so anbringen, daß es mit Zahnrad C in Eingriff kommt.
- Motor und Transistor montieren.
- Das dreieckige Blech aufsetzen.
  Die Kennzeichnung am Potentiometer darf sich nicht von der Kennzeichnung auf der Printplatte entfernt haben, und das Zahnrad A muß sich immer noch in der Mitte des Zahnkranzes befinden.
- Das Zahnrad E so montieren, daß es mit dem Zahnrad D in Eingriff kommt.
- Riemen montieren.

IMPORTANT!
NE PAS RETIRER LES VIS DE FOND, RETIRER LE COUVERCLE PLASTIQUE POUR LES OPERATIONS DE MAINTENANCE

Commande et réglage de la table orientable

Assemblage de la table orientable

- Amener le câble muni de la prise DIN par l'orifice du fond.
- Assembler la carte PCB02 «motor control» et la carte PCB01 microprocesseur à l'aide des trois chevilles plastique et les visser dans le fond du dispositif à palier afin de les fixer.
- Monter la roue d'engrenage A.
  La roue d'engrenage doit être au milieu de la couronne dentée (avec huit dents de chaque côté). Fixer la roue d'engrenage à l'aide d'une rondelle-frein.
- Monter la roue d'engrenage B sur le potentiomètre. Faire tourner la marque de cette roue de manière à la faire coïncider avec la marque de la carte de circuit imprimé (orifice 1 mm).
- Positionner la roue d'engrenage C de manière qu'elle s'engrène avec les deux premières roues.
- Positionner la roue d'engrenage D de manière qu'elle s'engrène avec la roue d'engrenage C.
- Monter le moteur et le transistor.
- Poser la plaque de métal triangulaire.
  La marque du potentiomètre ne doit pas s'être déplacée par rapport à la marque de la carte de circuit imprimé, et la roue d'engrenage A doit toujours être au milieu de la couronne dentée.
- Monter le roue d'engrenage E de manière qu'elle s'engrène avec la roue d'engrenage D.
- Monter la courroie.



Das motorisierte Fußgestell kann nunmehr justiert/überprüft werden

- Das Fußgestell an einen Empfänger anschließen.
- Das Fußgestell um ca. 20° nach einer Seite drehen: PICTURE >
- Die Position speichern: STORE PICTURE STORE
- Den Empfänger abschalten: ●

Das motorisierte Fußgestell soll sich jetzt zurückbewegen, so daß die Kennzeichnung am Zahnrad mit der Kennzeichnung auf der Printplatte übereinstimmt.

Wenn die Kennzeichnung nicht am richtigen Platz ist, das Fußgestell mit Hilfe des Trimmerpotentiometers, das von der gegenüberliegenden Seite erreichbar ist, einstellen.

- Empfänger einschalten.
- Nach Erreichen der gespeicherten Position abschalten.

Weitermachen, bis die Einstellung stimmt.

- Kunststoffdeckel montieren.

La table orientable est à présent prête à être réglée/utilisée

- Connecter la table à un récepteur.
- Faire tourner la table de 20° environ d'un côté: PICTURE >
- Mémoriser la position: STORE PICTURE STORE
- Eteindre le récepteur: ●

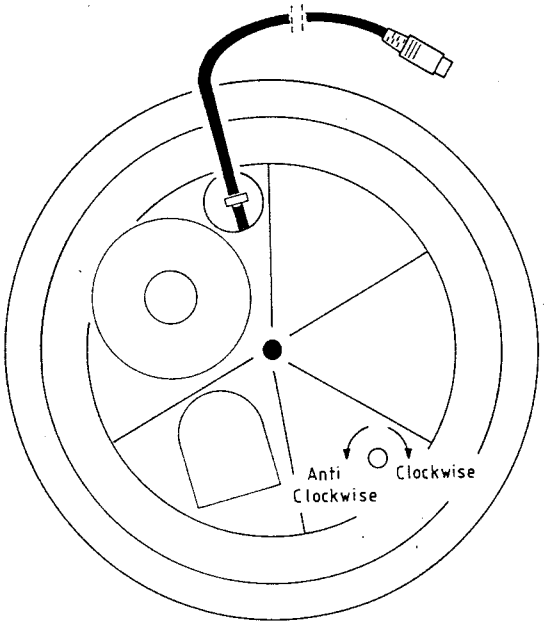
La table orientable doit alors revenir dans la position où la marque de la roue d'engrenage coïncide avec la marque de la carte de circuit imprimé.

Si ces marques ne coïncident pas, il convient de régler la table orientable à l'aide du potentiomètre d'équilibrage, accessible par le côté opposé.

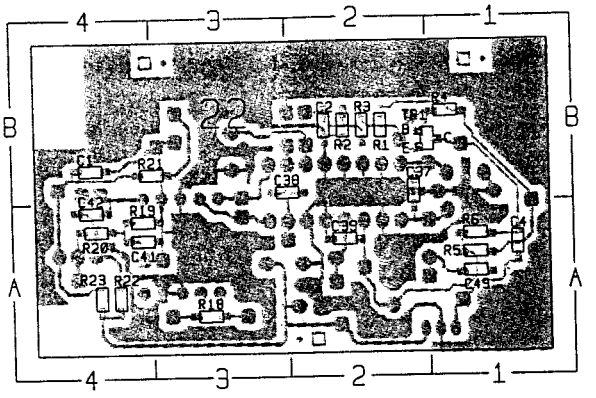
- Allumer le récepteur.
- L'éteindre une fois obtenue la position mémorisée.

Poursuivre jusqu'à ce que le réglage soit satisfaisant.

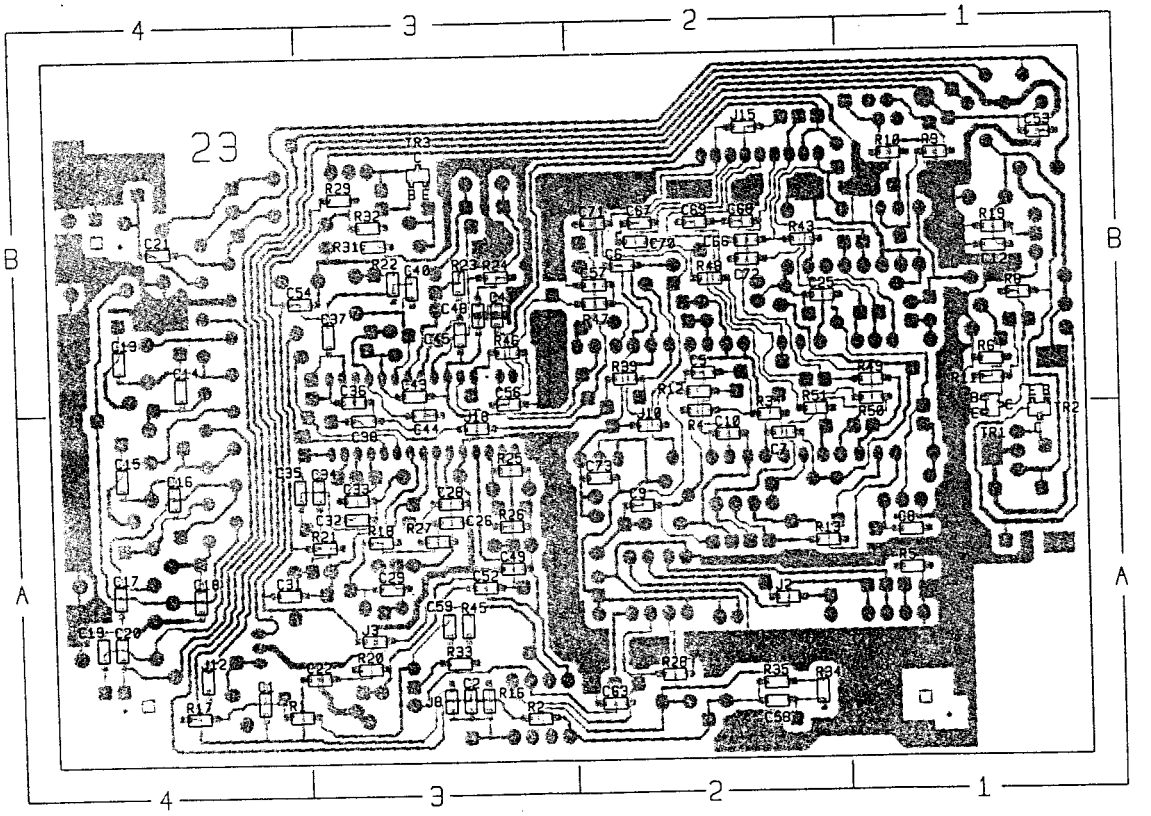
- Monter le couvercle plastique.



PCB 22, Demodulator
New version



PCB 23, Nicam D/A Decoder
New version



NICAM 728

NEW VERSION

Type 3037 installation kit Pal B/G for Beovision MX3000/5000

Type 3040 installation kit Pal I for Beovision MX3000/5000

Type 3041 installation kit Pal B/G for Beovision MX3000/4500

Type 3042 installation kit Pal I for Beovision MX3000/4500

Beovision MX3000, type 3142-3148

Beovision MX5000, type 3212-3218

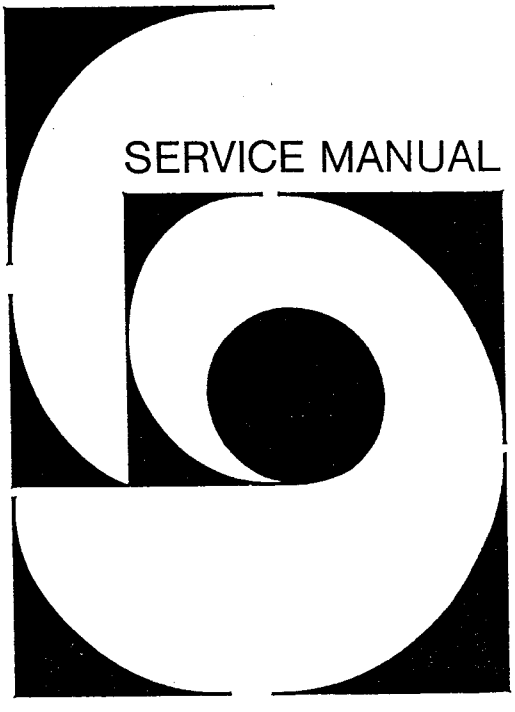


DIAGRAM D STEREO DECODER, SOUND CONTROLS, NICAM 728 DIGITAL SIGNAL PROCESSING, NEW VERSION

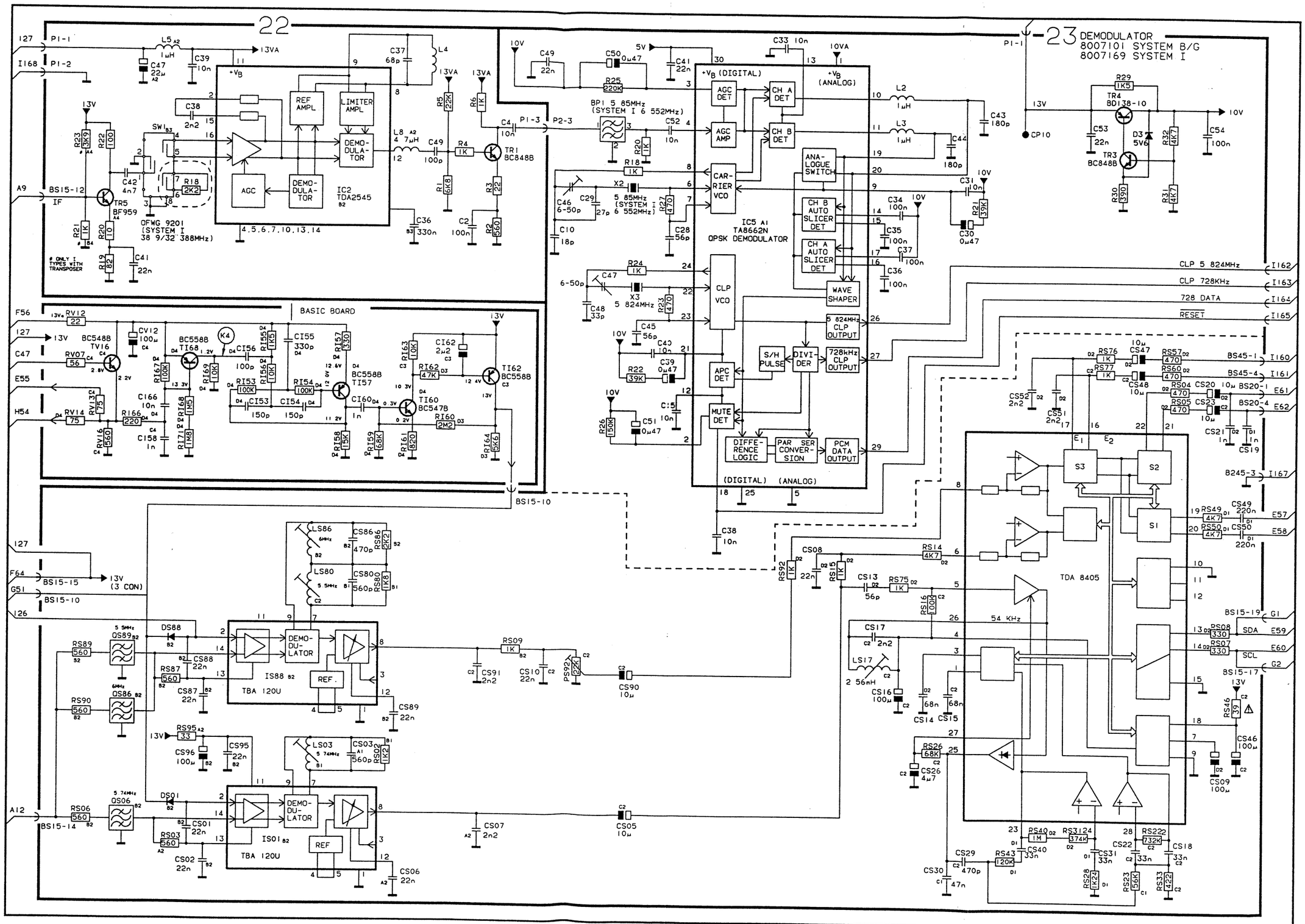


DIAGRAM E AF-AMPLIFIER, LINK INTERFACE, A/V CONNECTIONS, NEW VERSION

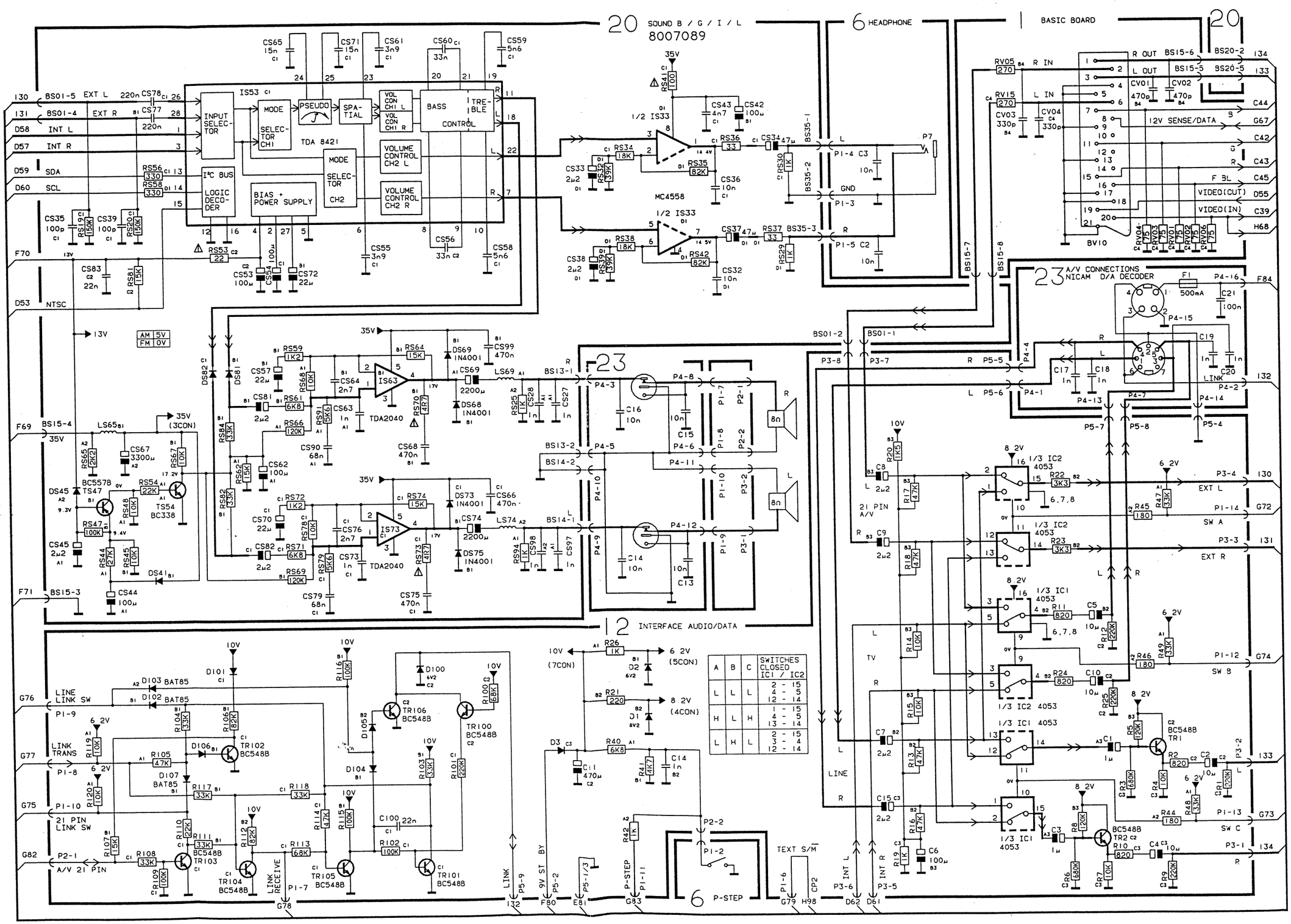
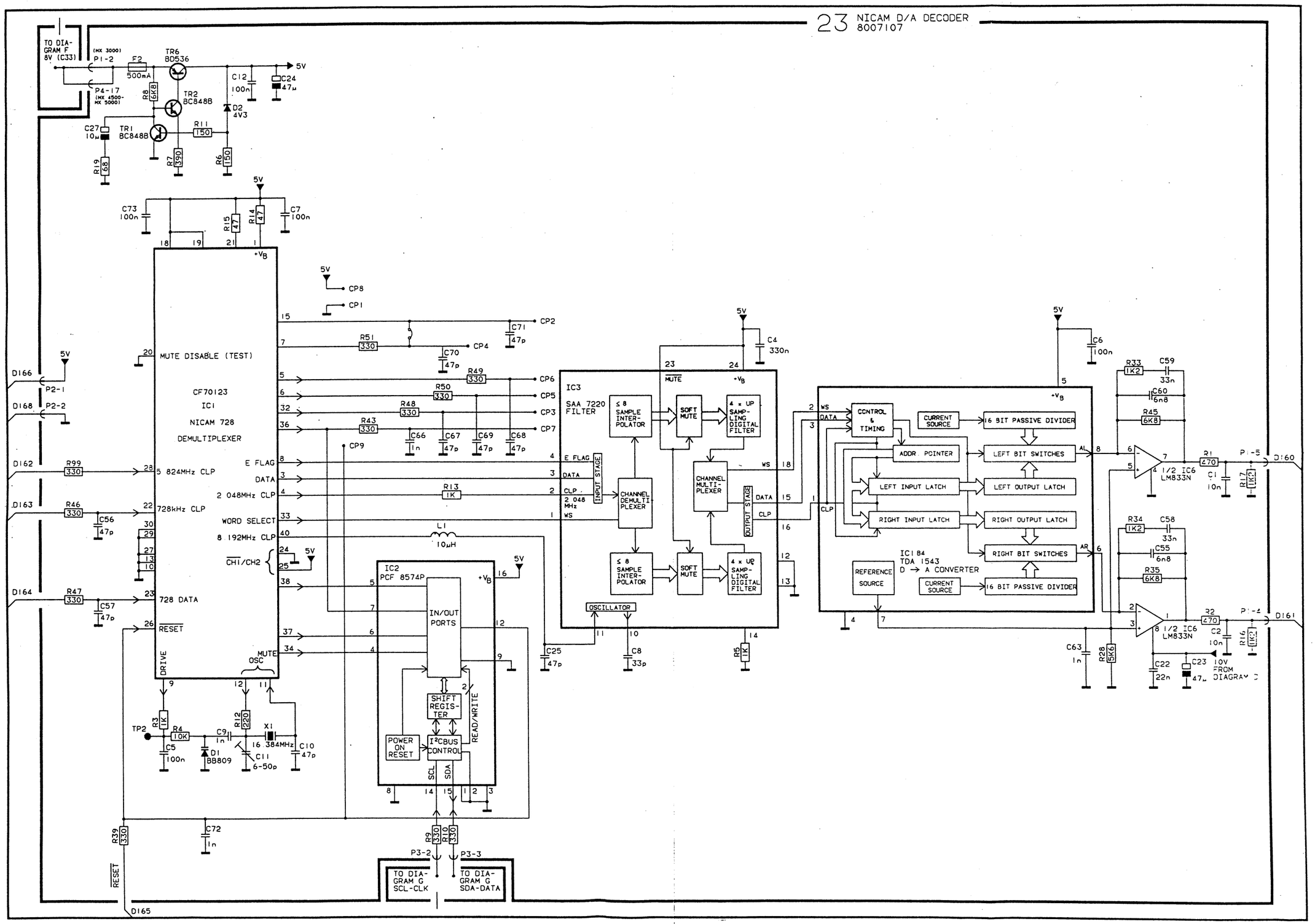
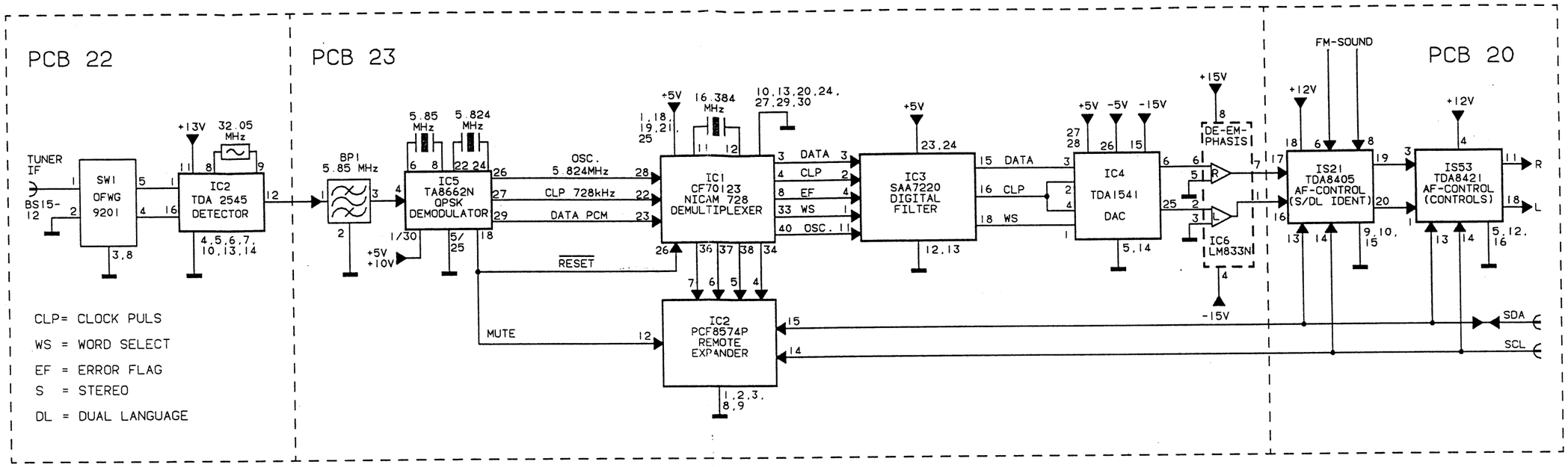


DIAGRAM 1 NICAM 728 DIGITAL FILTER, D/A CONVERTER, NEW VERSION



BLOCK DIAGRAM (NEW VERSION)

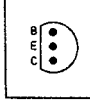
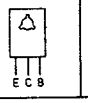
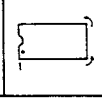


Standard Resistors:
Resistors SMD 2% 1/8 W
SMD 5% 1/8 W

	5%	2%	2%	2%	2%	2%	5%	5%
	x1	x10	x100	x1K	x10K	x100K	x1M	x10M
1.0	5011623	5011647	5011218	5011227	5011241	5011256	5011267	5011730
1.1	5011624	5011648	5011669	5011681	5011689	5011694	5011707	
1.2	5011625	5011649	5011219	5011682	5011490	5011257	5011708	
1.3	5011626	5011650	5011670	5011683	5011242	5011258	5011709	
1.5	5011627	5011651	5011220	5011228	5011243	5011259	5011710	
1.6	5011628	5011652	5011671	5011684	5011690	5011695	5011711	
1.8	5011629	5011653	5011672	5011229	5011244	5011260	5011712	
2.0	5011630	5011654	5011673	5011685	5011691	5011696	5011713	
2.2	5011216	5011655	5011674	5011230	5011245	5011261	5011714	
2.4	5011634	5011656	5011675	5011686	5011246	5011697	5011715	
2.7	5011635	5011657	5011497	5011231	5011247	5011262	5011716	
3.0	5011731	5011658	5011499	5011500	5011692	5011698	5011717	
3.3	5011217	5011659	5011676	5011232	5011248	5011263	5011718	
3.6	5011636	5011660	5011677	5011687	5011249	5011264	5011719	
3.9	5011637	5011661	5011221	5011233	5011491	5011699	5011720	
4.3	5011638	5011662	5011498	5011688	5011492	5011700	5011721	
4.7	5011639	5011269	5011222	5011234	5011250	5011265	5011722	
5.1	5011640	5011663	5011678	5011235	5011493	5011701	5011723	
5.6	5011641	5011664	5011223	5011236	5011251	5011702	5011724	
6.2	5011642	5011665	5011224	5011237	5011693	5011703	5011725	
6.8	5011643	5011666	5011225	5011238	5011252	5011704	5011726	
7.5	5011644	5011667	5011679	5011239	5011253	5011705	5011727	
8.2	5011645	5011270	5011226	5011240	5011254	5011266	5011728	
9.1	5011646	5011668	5011680	5011489	5011255	5011706	5011729	

(Glue dots, approx. 200, part no. 3181932).

LIST OF ELECTRICAL PARTS
New version

23	32	35	51	101	103	136	209
							

Resistors not referred to are standard, see page 20-5

PCB 22, 8007251

IC1△	8340496	101	TDA 2545A				
TR1	8320615	51	BC 848B	TR5	8320538	23	BF 959
C1	4010132		1 nF 10% 50V	C39	4010176		10 nF -20+80% 50V
C2	4010166		100 nF -20+80% 50V	C41	4010177		22 nF -20+80% 50V
C4	4010176		10 nF -20+80% 50V	C42	4010173		4.7 nF 10% 50V
C36	4130171		330 nF 20% 63V	C47	4200488		22 µF 20% 25V
C37	4000280		68 pF 5% 50V	C49	4000241		100 pF 5% 50V
C38	4010170		2.2 nF 10% 50V				
L4	8020359		Coil 38.9 MHz	L8	8020551		Coil 4.7 µH 10%
L5	8020600		Coil 1 µH 10%				
SW1	8030162		OFW G9201				
P1	7220710		Plug 3 pole				

PCB 23, 8007259

IC1△	8341159	136	CF 70123	IC4	8341194	103	TDA 1543
IC2△	8341158	136	PCF 8574P	IC5△	8341099	136	TA 8662N
IC3△	8341183	136	SAA 7220P/B	IC6	8640930	103	LM 833N
TR1	8320615	51	BC 848B	TR4	8320785	32	BD 138
TR2	8320615	51	BC 848B	TR6*	8320438	35	BD 536
TR3	8320615	51	BC 848N		3358242		Heat sink
D1	8300656	209	BB 809	D3	8300296	209	ZPD 5.6V 2%
D2	8300396	209	ZPD 4.3V 5%				
R7	5011021		390Ω 5% 1/2W	R30	5010070		390Ω 5% 1/4W
R14-R15	5011021		47Ω 5% 1/4W	R99	5010044		330Ω 5% 1/4W
C1-C2	4010157		10 nF 10% 50V	C39	4200476		0.47 µF 20% 50V
C4	4130171		330 nF 20% 63V	C40	4010176		10 nF -20+80% 50V
C5-C7	4010166		100 nF -20+80% 50V	C41	4010177		22 nF -20+80% 50V
C8	4000361		33 pF 5% 50V	C43-C44	4000282		180 pF 5% 50V
C9	4000345		1 nF 5% 50V	C45	4000240		56 pF 5% 50V
C11	4340028		6-50 pF 50V	C46-C47	4340028		5-60 pF 50V
C12	4010166		100 nF -20+80% 50V	C48	4000239		33 pF 5% 50V
C13-C16	4010176		10 nF -20+80% 50V	C49	4010177		22 nF -20+80% 50V
C17-C20	4010132		1 nF 10% 50V	C50-C51	4200476		0.47 µF 20% 50V
C21	4010166		100 nF -20+80% 50V	C52	4010176		10 nF -20+80% 50V
C22	4010177		22 nF -20+80% 50V	C53	4010177		22 nF -20+80% 50V
C23	4200483		47 µF 20% 16V	C54	4010166		100 nF -20+80% 50V
C24	4200482		47 µF 20% 10V	C55	4100241		6.8 nF 5% 63V
C25	4000293		47 pF 5% 50V	C56-C57	4000234		47 pF 5% 50V
C26	4000276		18 pF 5% 50V	C58-C59	4010175		33 nF 10% 50V
C27	4200431		10 µF 20% 16V	C60	4100241		6.8 nF 5% 50V
C28	4000240		56 pF 5% 50V	C63	4000345		1 nF 5% 50V
C29	4000278		27 pF 5% 50V	C66	4000345		1 nF 5% 50V
C30-C33	4010176		10 nF -20+80% 50V	C67-C70	4000234		47 pF 5% 50V
C34-C37	4010166		100 nF -20+80% 50V	C72	4000345		1 nF 5% 50V
C38	4010176		10 nF -20+80% 50V	C73	4010166		100 nF -20+80% 50V

△indicates that static electricity may destroy the component.

*Specially selected or adapted sample.

L1	8020552	Coil 10 µH 10%	L3	8020747	Coil 1 mH 10%
L2	8020747	Coil 1 mH 10%	L4	8020552	Coil 10 H 10%
BP1	8020734	Band pass filter 5.85 MHz			
F1	6600090	Fuse 500 mAT 250V	F2	6600090	Fuse 500 mAT 250V
X1	8090082	Crystal 16.384 MHz	X3	8090083	Crystal 5.824 MHz
X2	8090085	Crystal 5.85 MHz			
P1	7220427	Plug 5/5 pole	P4	7220436	Plug 17/17 pole
P3	7220779	Plug 4 pole	P5	3168754	Link panel

Parts not shown

Type 3037-3040

3152559	Holder f/PCB 12
3390382	Bag w/parts
3543115	Mounting instruction
3503537	Owner's manual

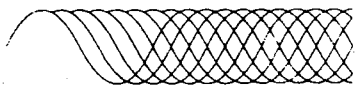
Type 3041-3042

3152559	Holder f/PCB 12
3390383	Bag w/parts
8341156	IC f/1IR01 – HD 404919
3543117	Instruction f/1IR01
3543114	Mounting instruction
3503537	Owner's manual

JUSTERINGER
Vigtigt! Der må ikke justeres i filteret BP1.

Ved alle justeringer skal apparatet tilføres et NICAM stereo antennesignal.

Carrier VCO
Tilslut et oscilloskop til ben 20 på 23IC5, QPSK-Demodulator.



Med 23C46 justeres, indtil øjemønster-signalet er støjfrit og stabilt.

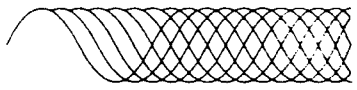
Clock VCO
Drej 23C47 med uret, indtil stereolyden forsvinder, (stereo-indikatorerne i øverste højre hjørne af TV'et slukker). Drej derefter 23C47 mod uret, indtil stereolyden forsvinder. Drej nu 23C47 til midt imellem de to punkter.

OSC
Indstil oscilloskopet til DC, og tilslut det mellem 23R3 og 23R4.
Juster 23C11, indtil spændingen står stabilt på 1,5 V DC.

ADJUSTMENTS
Note! Do not adjust in the filter BP1.

During all adjustments, the TV-set must be fed a NICAM stereo antenna signal.

Carrier VCO
Connect an oscilloscope to pin 20 of 23IC5, QPSK-Demodulator.



Adjust 23C46, until the eye pattern signal is noiseless and stable.

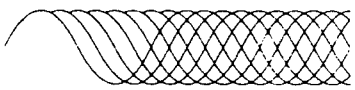
Clock VCO
Turn 23C47 clockwise until the stereo sound disappears (the stereo indicators in the upper right-hand corner of the TV-set switches off). Now turn 23C47 counter-clockwise until the stereo sound disappears. Finally turn 23C47 until mid-position between the two positions.

OSC
Set the oscilloscope to DC and connect it between 23R3 and 23R4.
Adjust 23C11 until the voltage is stable at 1.5 V DC.

JUSTIERUNGEN
Wichtig! Keine Justierungen am Filter BP1 vornehmen.

Bei sämtlichen Einstellvorgängen muß dem Gerät ein NICAM-Stereo-Antennensignal zugeführt werden.

Spannungsgeregelter Träger-Oszillator
Einen Oszillographen an Anschluß 20 des 23IC5, QPSK-Demodulator anschließen.



Mit 23C46 solange justieren, bis das Augenmuster-Signal rauschlos und stabil ist.

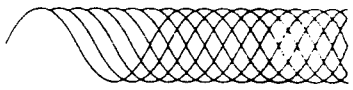
Spannungsgeregelter Clock-Oszillator
23C47 im Uhrzeigersinn drehen, bis der Stereo-Ton verschwindet (die Stereo-Anzeigelämpchen in der oberen, rechten Ecke des Fernsehgerätes erlöschen). Anschließend 23C47 entgegen dem Uhrzeigersinn drehen, bis der Stereo-Ton verschwindet. Jetzt 23C47 auf eine Position zwischen den beiden Punkten einstellen.

OSC
Den Oszillographen auf Gleichstrom einstellen und zwischen 23R3 und 23R4 anschließen. 23C11 solange verstellen, bis die Spannung bei 1,5 V Gleichstrom stabil ist.

REGLAGES
Attention! Il est interdit de régler le filtre BP1.

Pour tous les réglages, appliquer à l'appareil un signal stéréo d'antenne NICAM.

Carrier VCO
Raccorder un oscilloscope à la bobine 20 de 23IC5, QPSK-Demodulateur.



A l'aide de 23C46, régler jusqu'à ce que le signal rappelant un oeil soit stable et exempt de parasite.

Clock VCO
Tourner le condensateur 23C47 dans le sens horaire jusqu'à évanouissement du son stéréo (les indicateurs stéréo dans le coin supérieur droit du téléviseur s'éteignent). Tourner ensuite 23C47 dans le sens antihoraire jusqu'à évanouissement du son stéréo. Amener alors le condensateur 23C47 à mi-chemin entre ces deux points.

OSC
Régler l'oscilloscope sur cc et le raccorder entre 23R3 et 23R4.
Régler 23C11 jusqu'à obtenir une tension stable de 1,5 V cc.